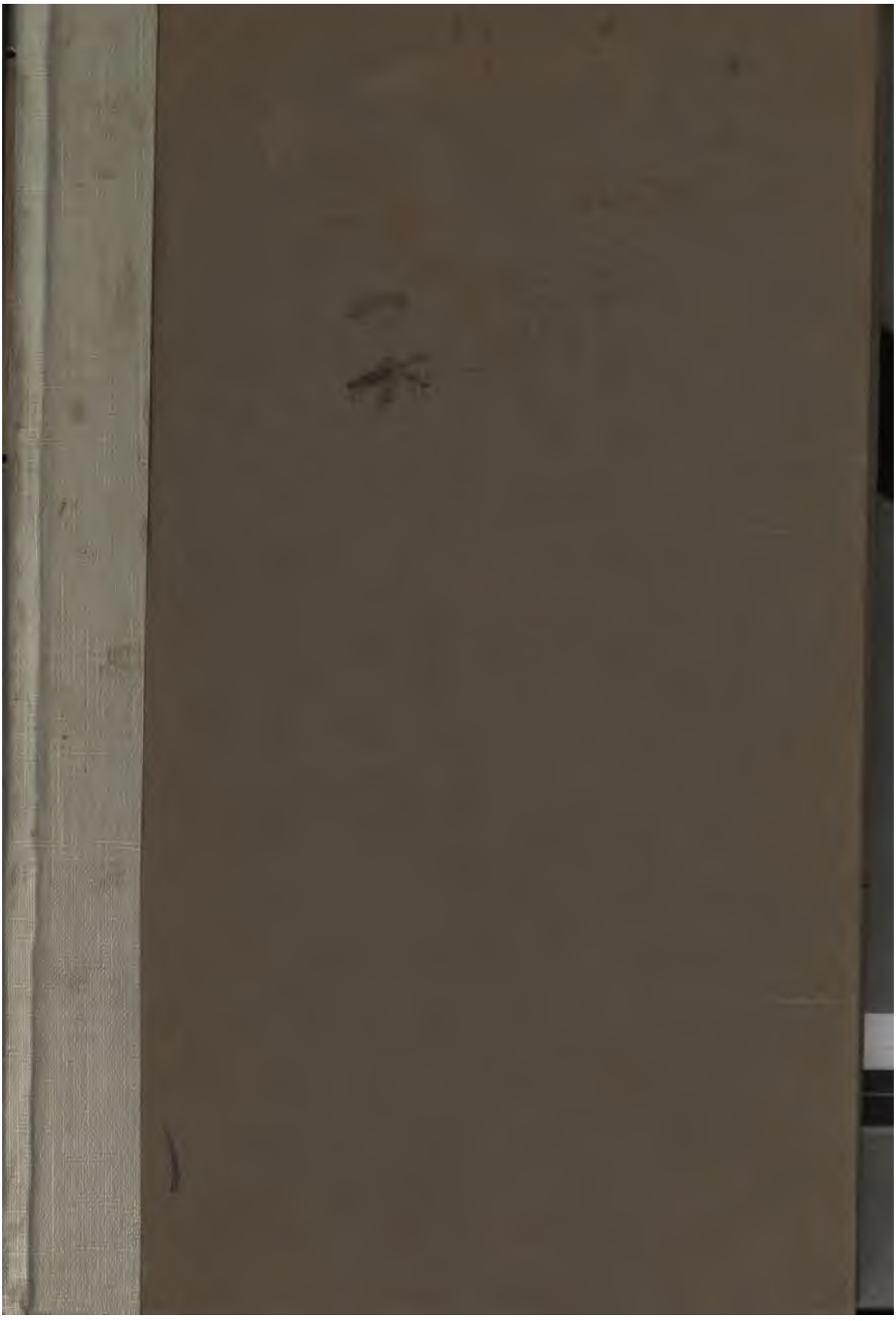


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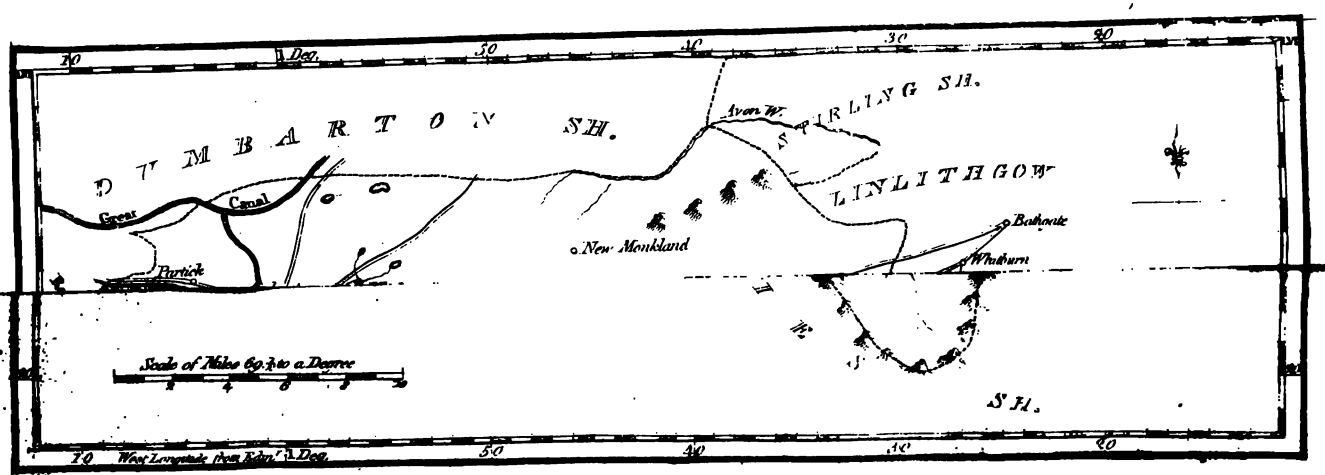
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Great Britain. Board of agriculture

# GENERAL VIEW

OF THE

# AGRICULTURE

OF THE COUNTY OF

# *CLYDESDALE.*

WITH OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT.

BY JOHN NAISMITH.

DRAWN UP FOR THE CONSIDERATION OF THE BOARD OF AGRICULTURE AND INTERNAL IMPROVEMENT.

---

And ſome ——— ——— ———
Have held the ſcale of empire, rul'd the ſtorm
Of mighty war; then, with unwearied hand,
Diſdaining little delicacies, ſeiz'd
The plough.

THOMSON'S SEASONS.

---

GLASGOW:

PRINTED BY J. MUNDELL;

SOLD BY G. NICOL, PALL MALL, LONDON, BOOKSELLER TO HIS MAJESTY, AND THE BOARD OF AGRICULTURE; AND BY MESSRS. ROBINSON, PATER NOSTER ROW; J. SEWELL, CORNHILL; CADELL & DAVIES, STRAND; WILLIAM CREECH, EDINBURGH; AND JOHN ARCHER, DUBLIN.

1798.

## PRELIMINARY OBSERVATIONS

TO THE

## *CLYDESDALE RE-PRINTED REPORT.*

AGRICULTURE has been regarded by the wiſeſt men in all ages, as the moſt important employment of mankind, and the firmeſt ſupport of a ſtate; and being of the moſt laborious kind, and attended with uncommon hazard and difficulty, ſeems not only to merit, but demand, every poſſible degree of public patronage. Yet, notwithſtanding the boaſted improvements of modern times, it is wonderful to obſerve how little its intereſts have been regarded by ſtateſmen and legiſlators. Amidſt ſuch general neglect, it is honourable to Britain, and muſt give pleaſure to every lover of his country, that this uſeful art is at length dignified, by being made a national object, and engaging the attention of the firſt characters of this kingdom. Unhappily the generous exertions of the Board of Agriculture have commenced in unpropitious times, when the rage of war, having diſtracted the public attention, and the ſullen ſpirit of party narrowed the minds of men, and raiſed up among them the demon of jealouſy and diſtruſt, in the room of general benevolence, every liberal enterpriſe of national improvement is ſtifled or ſuſpended. But ſhould tranquillity once more be reſtored, it may ſtill be hoped that the patriotic operations of this honour-

able Board may contribute largely to repair our misfortunes.

In this view, it is desirable to have even the smallest opportunity of promoting the agricultural improvement of the country, by furnishing part of the information required. But however agreeable it may be to undertake the task, in the execution it is no light matter for an individual to commit himself to the public, on such subjects, and under such circumstances, as the present.

When the agricultural state of the county of Lanark was published in the year 1794, it had been recommended to make it as concise as possible. Accordingly the mass of collected materials was searched, and all possible pains taken to reconcile seeming contradictions, to purge the whole of errors and frivolous matter, and to give a brief extract of all the useful information, in the order which appeared to the writer to be the most natural. Copies of this were distributed among a number of the most considerable landholders, agriculturists, husbandmen, and indeed persons of every description in the county who had furnished articles of information, inviting them to return such remarks as should occur to them. But though some have been pleased to express a general approbation, not a single remark, or additional piece of information, has been sent; nor do the remarks on a few copies returned to the Board, by gentlemen residing in distant counties, contain any thing of moment. The writer is, therefore, left to himself in this republication, without a corroborating testimony to support him, or a correcting hand to set him right. The difficulty is also increased by the uncommon occurrences

of theſe eventful times. In the ſhort period which has elapſed ſince this account was laſt publiſhed, undoubtedly the value of money has greatly ſunk; but the price of all kinds of proviſions ſtill roſe in a greater degree, even to alarm the nation, at one period, with the dread of a famine. The proſpects of the huſbandman were thus too much elevated; and the late reduction of the value of corn, with the ſcarcity and high wages of labourers, has thrown them into real diſtreſs. Theſe and other concomitant circumſtances, connected with the times, muſt affect the intereſt of agriculture; in what manner, however, it would be raſhneſs to pretend to predict. But, in giving a fair ſtate of the country, on the one hand, how can they be overlooked?—and, on the other, how can any ſafe concluſion be drawn from them?

But, under theſe difficulties, he ſhall endeavour, as well as he can, firſt to arrange the former uncontradicted facts, under the different chapters and ſections to which they belong; and then, ſo far as his opinion ſeems neceſſary to fill up ſome articles in the new arrangement, he muſt beg leave to give it with freedom. It may, perhaps, in ſome caſes, be ſingular; but if in any it ſhould be thought erroneous, he hopes this will be imputed to defect of judgment, and not intention. At his advanced life, it is not probable the public will be again troubled with his ſentiments; and on this account he is neither actuated by the deſire of applauſe nor the dread of cenſure, but ſtill would be ſorry to give any juſt cauſe of offence. He hopes, therefore, to meet with candid indulgence, in giving his laſt faithful teſtimony on ſubjects which he deems of great importance to the national proſperity.

# AGRICULTURAL SURVEY

OF

# *CLYDESDALE.*

## CHAPTER I.

### GEOGRAPHICAL STATE AND CIRCUMSTANCES.

#### SECT. I.—*Situation and Extent.*

CLYDESDALE is ſo called from the noble river which has its ſource in the upper confines of the diſtrict, traverſes it in a winding courſe of upwards of 60 miles, biſecting it longitudinally, and afterwards wafts the trade of Glaſgow to the ocean. This tract is otherwiſe called the county or ſheriffdom of Lanark. It is ſituated between 55° 22′ and 55° 58′ north latitude, and between 3° 15′ and 4° 19′ weſt longitude. It is in the centre of the country, between the Atlantic and German Oceans, and is bounded by the counties of Weſt and Mid Lothians and Peebles on the E., by Dumfrieſhire on the S., by the counties of Ayr and Renfrew on the W., and by thoſe of Dumbarton and Stirling on the N. The greateſt length from N. to S. is about 47 miles, and the greateſt breadth from E. to W. about 32 miles. The ſquare contents are perhaps nearly 870 miles, equal to 556,800 Engliſh acres, or nearly 445,440 of the ordinary Scotch meaſure.

## SECT. 2.—*Diviſions.*

This diſtrict is ſubdivided into three inferior diviſions called *wards*, each under the particular juriſdiction of a ſubſtitute, appointed by the ſheriff depute of the county. The upper ward, of which the ancient burgh of Lanark is the chief town, comprehends the pariſhes of Carluke, Lanark, Carſtairs, Carnwath, Dunſire, Dolphinton, Walſton, Biggar, Liberton, Lamington, Coulter, Crawford, a ſmall part of the pariſh of Moffat, the reſt of which is in Dumfriesſhire, Crawfordjohn, Douglas, Wiſton and Roberton, Symington, Covington, Pettinain, Carmichael, and Leſmahagow. The middle ward, of which the town of Hamilton is the centre, comprehends the pariſhes of Hamilton, Blantire, Kilbride, Avondale, Glasford, Stonehouſe, Dalſerf, Cambuſnethan, Shotts, Dalziel, Bothwel, Eaſt Monkland, and Weſt Monkland. The lower ward, lying immediately around the city of Glaſgow, beſides the country or barony pariſh of Glaſgow, contains the pariſhes of Calder, Cambuſlang, Ruthergłen, Carmunnock, Govan, and a part of Cathcart; the remainder of this laſt pariſh being in the county of Renfrew.

There is a large map of this county publiſhed by Mr. Roſs, in the year 1773, and an abridgement of it has been ſince made on a ſmall ſcale. As no plan of the county has been taken for this report, which, for the ſake of the many new lines of roads lately drawn, would have been deſirable, the reader muſt be referred to theſe maps.

## SECT. 3.—*Climate.*

There being a great difference in the ſituation and altitude of this county, not leſs variety takes place in the ſtate of the weather than in the ſurface and ſoil of different parts. Beſides that inconſtancy of climate, to which the iſland in general is ſubject, there are circumſtances in the local ſituation of the county, which occaſion conſiderable variations of the weather, in the different parts of it; ſo that to be

able to give a good account of theſe, would, perhaps, be to give a tolerable medium ſtate of the weather in Scotland. The lower end of the county is ſituated in a narrow iſthmus, not much more than 30 miles broad, between the Forth and the Clyde, which open gradually to the ſea, on each ſide of the iſland, admitting the temperate breath of the ſea breeze. The wind is computed to blow, about two-thirds of the year, from the S. W. and W. *, over a vaſt ocean, where no land intervenes, to prevent it from coming to the coaſt, ſaturated with the moderate temperature of that element. The winds from the eaſterly points, which, coming from the Continent, over a narrow ſea, are ſharper, blow leſs frequently, and their force is ſomewhat broken by the high land on the eaſt ſide of the county, ſo that the cold damps, called *Eaſterly-Hars*, ſo prevalent on the eaſt coaſt, ſeldom arrive here: conſequently the cold is moderate. Intenſe froſt is ſeldom of long continuance; and deep or long lying ſnows are rare: Hence there are few ſpots on which the verdure of the year is longer protracted. On the other hand, the moſt frequent winds coming over ſo wide an ocean, are fraught with vapour, which frequently overclouds the ſky, cools the air, and renders the Summer's heat leſs intenſe; ſo that it is frequently ſcarce ſufficient to ripen the fruits of the earth. Theſe vapours, intercepted by the neighbouring heights in the counties of Renfrew and Dumbarton, fall in frequent and heavy ſhowers, on the northern parts of the county. In going up the Clyde the ſurface flattens; ſcarce a mountain, between the river and the ocean, raiſes its head to catch the clouds; and the current of air paſſing, without interruption, acroſs the country, the rain is

* That this is the moſt frequent and moſt forcible wind, is evident from the appearance of the trees, the tops of which generally incline to the N. E. And it is no leſs remarkable, that they put out the longeſt and ſtrongeſt root towards the S. W., in order to ſupport them againſt the moſt frequent attacks; ſo that, when a N. E. ſtorm happens, triple the number of trees are blown down, which fall under as great blaſts from the oppoſite quarter.

leſs *. This circumſtance occaſions other variations of the weather in different ſituations. The clouds, in paſſing over, often water the higher grounds on the eaſtern and weſtern ſides of the county; and, buoyed up by the denſe air in the hollow, leave the middle parts dry. The effects of theſe, and other meteorological phenomena to be now mentioned, on agriculture and vegetation, merit attention.

But in diſcuſſing this ſubject, it may be proper here to premiſe, that the motions of the air, in calm weather, which ſometimes vary, in the courſe of a few days, round all the points of the compaſs, being only breathings from the neareſt clouds, which occur during the ceſſation of the more general currents, are not characteriſtic of the climate of any particular tract. The ſame thing may be obſerved of the rains which accompany thunder; they being neither dependant on the general winds, nor the poſition of the land, but falling indiſcriminately on any place, over which electrical clouds happen to be ſuſpended; though they are no doubt moſt frequent and copious near high ſummits which attract theſe clouds.

The moſt frequent wind, as has been already ſaid, is from the S. W.; next to it is the N. E., which, for the moſt part, is accompanied with fair weather. The heavieſt and moſt laſting rain, but not the moſt frequent, is from the S. E. The wind ſeldom blows long from the S. without bringing rain; and this rain is heavy, but of ſhort continuance. The rain from the W. and S. W. comes in repeated ſhowers, between ſhort intervals of fair weather; and the greateſt quantity of rain, here, comes from the latter, which, as the wind blows much from that quarter, in the beginning of the year, generally drenches the ground greatly before ſeed-time. Rains from the N. W., N., and N. E., are

* As a proof that the height of the land between the Clyde and the weſt coaſt is very moderate, there are places in the middle ward, on the north ſide of the river, from 100 to 150 feet above the level of the ſea; from whence all the heights of the iſle of Arran, above fifty miles diſtant, may be ſeen in a clear day.

neither frequent nor heavy, but ſullen and unnouriſhing. The N. E. wind is moſt frequent in the months of April and May; it ſometimes ſets in in March, and is of great importance, in preparing the ground for the reception of the ſeed.

In a country, where there is almoſt every where an under ſtratum, through which no water can filter, in ſpite of every attention to draining, the land is ſoaked with water, which can only be drawn off by means of exhalation; and ground of this kind is not in a condition to exert its powers, till the cold, ſluggiſh moiſture of the winter is exhaled. When a courſe of dry weather does not happen, therefore, in due ſeaſon, the ſeed time muſt either be deferred to a late period, or the ſeed, committed to the crude ſoil, will make but a ſlow and imperfect progreſs. This is one cauſe of the lateneſs of the Lanarkſhire harveſts. The air which overſpreads the hollows, being denſe and dry, contributes to quicken exhalation, ſo that the low lands dry ſooner than thoſe on the heights; upon which a lighter moiſter air floats, and flying ſhowers oftener fall. The ſeed-time is therefore later, or the preparation leſs perfect on the heights than on the plains; which contributes, with other cauſes, to render the harveſts leſs early and leſs mature on the former, than on the latter. Perhaps, too, there is a principle, mingled with the moiſt air of the heights, ſtill more inimical to vegetation, than the moiſture which the ſurface ſoil retains. Thoſe huge maſſes of peat earth, with which the county abounds, are ſo cold and torpid that it is not uncommon, after a hard Winter, to find the froſty congelation, in large bodies, ſtill remaining in them, when the Summer is far advanced, and the heat has been conſiderable. May we not then ſuppoſe, that the cold moiſture ariſing from them, in exhalations, before it acquire the temperature of common air, may cool the earth, and benumb the vegetables over which it paſſeth? However this may be, it is certain, that the high lands, where theſe bodies of peat earth abound, are leſs fertile than they have been in early times; neither the

ſtately oak, nor its accompanying bruſh-wood, now appear, where they had once flouriſhed abundantly; and now lie buried together under the torpid chaos: nor can the utmoſt induſtry reſtore them in that vigour, with which in former ages they have ſpontaneouſly grown. The oak particularly, now planted on the beſt ſoil, in the midſt of a thicket, will barely live; while perhaps, within an hundred yards, one of a magnificent ſize may be found lying on the ſpot, where, it may evidently be ſeen, by its roots ſtill faſt in the earth, it had been produced.

Something to the ſame purpoſe may be obſerved reſpecting the annual productions of the earth. There are many places to be found, on the ridges on both ſides of this county, which ſeem once to have been accurately cultivated, and now for a time left neglected. Judging from the appearance of the country where theſe places are, it is preſumable that the climate in which they are ſituated is not adapted to the growth of corn; and it is probable they have been abandoned for that reaſon. But it is plain the cultivators had not always found this to be the caſe; for the appearance of the places in queſtion is not like that of ſlight attempts, raſhly undertaken, and quickly abandoned; but like that of fields, which have been for a conſiderable time under attentive culture *. How ſhall we account for this failure of fertility? The climate, upon the whole, is much the ſame as it was from the earlieſt notices we have of it. The illuſtrious biographer of Agricola, about the time when that general was erecting ramparts upon the northern confines of this

* Beſides the increaſed cold, occaſioned by the increaſe of peat moſs, one may ſuppoſe other cauſes of this deſertion. For example, it is ſaid the wild grey oats ſtill continued to be ſown on ſome of the worſt land in this county, about the beginning of the preſent century; and they are yet ſown in ſome places of Galloway, and the North Highlands. This plant is hardier and thrives on worſe land than the cultivated oats. The wild oats might have been cultivated on the places alluded to; and when the other oats came into general uſe, the fields which are fit only for the former, might be neglected. But this will hardly ſatisfy a perſon who has carefully examined the country, and diſcovered many other marks of diminiſhed fertility.

county, characteriſes the Caledonian weather thus: "Cœ-"lum crebris imbribus ac nebulis fœdum: Aſperitas frigo-"rum abeſt;" which correſponds pretty much with the account above given, of the climate of the lower ward. It muſt therefore ariſe from ſome ſuch local cauſe as that which has been ſtated. It is natural to ſuppoſe, that from thoſe large beds of ſpongy matter, a conſiderable quantity of moiſture charged with the chilling cold it has contracted, muſt be daily evaporated. This muſt either be diſſipated in the ſurrounding atmoſphere, increaſing the cold all around the places from which it is drawn; or, creeping unmixed along the ſurface, produce ſtill more baneful effects, wherever it ſpreads. In either caſe, peat moſſes, beſides being of little uſe themſelves, are highly unfriendly to the general vegetation of the country; and as they are ſtill accumulating, it is melancholy to anticipate, to what height their malignant influence may arrive.

We now return to take notice of other effects of the climate on vegetation. The greateſt droughts are in the months of May and June. When the weather is dry in the latter end of May, it commonly continues ſo in June, till thunder brings rain *. The violent exhalation, in theſe months, ſuddenly binds up the wet clay ſoil, making it ſo hard that the roots of the plants cannot extend in it; ſo that vegetation is almoſt ſuſpended till the rains come. The ground is generally well watered towards the latter end of June and beginning of July, and then a great growth commences; and as the latter end of Summer is generally more rainy than the beginning of it, this growth is protracted till the ſeaſon is far advanced, and occaſions a late harveſt. The drought in May, which is often accompanied with a cold wind, greatly checks the riſing of the paſture, but is ſtill more injurious to the hay crop, which, when ſtunted at this time, never again recovers.

Proceeding up the Clyde, the iſland becoming broader,

* From the 8th of May to the 18th of June, 1788, not a drop of rain fell in the middle ward.

and the ſituation farther diſtant from the mouth of the river, the influence of the ſea air diminiſhes. The eminences in the upper ward being more frequent and of greater altitude, give more interruption to the current of air from ſea to ſea; and the climate is more ſimilar to that of a continent, the Summer's heats and the Winter's colds being more ſteady and more intenſe *. There is more rain above the falls than in the middle ward; but from the nature of the ſoil, it is ſeldomer injurious to the huſbandman, excepting in the time of harveſt; nor are the

* The following table is extracts from the accurate obſervations of an ingenious friend, reſiding in the low grounds of the upper ward, on the extremes of Summer heat and Winter's cold, for a number of years paſt, contraſted with the greateſt heat and cold on the ſame days; extracted from a very exact journal of the weather kept near the medium height of the middle ward, and will beſt illuſtrate what is here ſtated. By thermometers on Farenheit's ſcale.

TABLE,

Showing the extremes of heat and cold in the upper and middle wards, on the days under-mentioned.

HEAT.

| Greateſt Height of the Thermometer. | | | | | |
|---|---|---|---|---|---|
| Year. | Month. | | | Up. | Mid. |
| 1785 | June | 25 | —— | 80° | 76° |
| | | 26 | —— | 80 | 77 |
| | | 27 | —— | 85 | 87 |
| | | 28 | —— | 85½ | 84 |
| | | 29 | —— | 82 | 80 |
| | | 30 | —— | 82 | 80 |
| | July | 26 | —— | 80 | 74 |
| 1788 | June | 17 | —— | 79 | 75 |
| 1791 | July | 2 | —— | 79 | 56 |
| | | 3 | —— | 81 | 66 |
| 1792 | Aug. | 8 | —— | 78 | 70 |
| 1793 | July | 9 | —— | 78 | 72 |
| | | 10 | —— | 84 | 71 |
| | | 11 | —— | 77 | 66 |

COLD.

| Degrees below the Freezing Point. | | | | | |
|---|---|---|---|---|---|
| Year. | Month. | | | Up. | Mid |
| 1783 | Dec. | 30 | —— | 30° | 24° |
| 1784 | Jan. | 21 | —— | 31 | 17 |
| | | 23 | —— | 35 | 20 |
| | | 25 | —— | 30 | 10 |
| | | 27 | —— | 23 | 21 |
| | Dec. | 13 | —— | 28 | 16 |
| 1785 | Dec. | 29 | —— | 25 | 11 |
| | | 30 | —— | 30 | 15 |
| | | 31 | —— | 41 | 24 |
| 1786 | Jan. | 1 | —— | 43 | 40 |
| | | 2 | —— | 41 | 19 |
| | Dec. | 20 | —— | 32 | 18 |
| 1788 | Dec. | 16 | —— | 38 | 32 |
| 1789 | Jan. | 11 | —— | 27 | 16 |

NOTE, On the 3d of October, 1782, the thermometer ſtood 16° below the freezing point, and on the 4th, 12°, in the upper ward. The extreme cold of theſe days is not marked in the middle ward journal. The earth was frozen, but at nine A. M. the thermometer was above the freezing point.

Summer's droughts ſo hurtful. Aſcending to the upper extremity of the county, another change again takes place. The higheſt ſummits intercept the clouds, and occaſion frequent rains; frequent miſts hover on the hills, obſcuring the ſky and cooling the air; the Summer heats are frequently interrupted by cold guſts; the Winters are cold and tedious, long retaining on the ſurface the heavy ſnow which falls in that tract.

Although the general character of the climate is the ſame now as in former ages, it is certain that courſes of good and bad ſeaſons repeatedly occur, which materially affect the produce of the earth. It would be a curious inquiry, were we able to trace theſe revolutions for a conſiderable ſeries of years; and might probably lead to ſome diſcovery, whether there be any fixed law in Nature, by which they are brought about. But, perhaps, there are no records to be found, which could be depended upon for this purpoſe. It is ſaid there are regiſters of the price of grain, which tend to ſhow that a courſe of bad ſeaſons happened about the end of the 16th century: and it is well authenticated, that ſix or ſeven years, near the end of the 17th, were very unfavourable. By the concurring teſtimony of many perſons living and lately dead, we are aſſured, that from near the beginning of the preſent century, to the year 1740, the ſeaſons were moſtly very favourable. From thence to 1756 incluſive, many unfavourable ones occurred. The year 1757, though the Spring was backward, was a warm Summer, and certainly had a good crop; for the price of barley fell this year from 1l. 6s. 8d. to 10s. 6d. per boll. From this to 1772, there were ſeveral pretty favourable ſeaſons; and few have happened ſince, in which the fruits of the earth have not ſuffered from unſeaſonable froſts in Spring or Autumn, or both. The years 1779 and 1781, were the moſt favourable, and the crops early and good. The ſeverity of the year 1782, is too memorable to be forgotten; and the froſts in the beginning of Summer and in Autumn, have

been very prevalent ever ſince. It may be proper here to ſubjoin the degrees of cold, by which different vegetables are injured.

## TABLE,

*Of the Degrees of Cold beneath the freezing point, which injure different vegetables.*

| | Degrees. |
|---|---|
| Potatoes, either in Spring or Autumn, the leaves affected and growth checked, by - - - | 2 |
| Ditto, ditto, the ſtem attacked, and its farther growth prevented, and if in Autumn, the root makes no more progreſs, by - - | 4 |
| Green peas and barley, when the ear is juſt become milky, ſpoiled by - - - - | 4 |
| Beans, when green or wet, by - - - - | 5 |
| Oats, when the ear is milky, by - - | 6 |
| Ditto, when green, and the ear watery, on porous ſoils, will ſtand, without being much hurt - | 7 |
| Ditto, ditto, on firm clay, ditto - - - | 10 |
| Clover, in the tender leaf, hurt by - - | 3 |
| Ditto and rye graſs, the crop in May or June, ruined by - - - - - - | 9 |
| Turnips on the ground in Winter, injured by | 24 |
| Ditto, ditto, totally deſtroyed, by - - | 30 |

*Note*, That froſt hurts plants ſooneſt when the air is ſtill and the dew great, or when it comes on immediately after rain; and the injury does not happen unleſs the froſt continues till the ſun be above the horizon. When the froſt goes off before morning, and the ſky is overcaſt with freſh clouds, plants eſcape unhurt, though they may have ſuffered a pretty ſevere froſt during the night.

We ſhall now conclude this article by ſubjoining the following table, containing an abſtract of the average heat, and number of dry and wet days every month of the year, for two periods of 5 years each, at 20 years diſtance, which, it is hoped, along with what has been ſaid, will convey a pretty diſtinct idea of the ſtate of the weather,

# TABLE,

Showing the average height of the Thermometer, and number of dry and wet days in the Middle-Ward of CLYDESDALE, for five years, beginning with 1768, and five years beginning with 1788.

| | April. | | | May. | | | June. | | | July. | | | Auguſt. | | | September. | | | Amount. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Years. | Ther | Dry | Wet | Ther | Dry | Wet | Ther | Dry | Wet | Ther | Dry | Wet | Ther | Dry | Wet | Ther | Dry | Wet | Ther | Dry | Wet |
| 1768 | 50 | 23 | 7 | 59 | 29 | 2 | 62 | 28 | 2 | 64 | 19 | 12 | 63 | 25½ | 5½ | 57 | 19½ | 10½ | 355 | 144 | 39 |
| 1769 | 49 | 24½ | 5½ | 56 | 26 | 5 | 58 | 20 | 10 | 65 | 24 | 7 | 61 | 21 | 10 | 58 | 18½ | 11½ | 347 | 134 | 49 |
| 1770 | 44 | 25 | 5 | 56 | 25½ | 5½ | 58 | 21½ | 8½ | 63 | 23 | 8 | 66 | 27 | 4 | 61 | 20 | 10 | 348 | 142 | 41 |
| 1771 | 46 | 26½ | 3½ | 56 | 22 | 9 | 64 | 27 | 3 | 65 | 24½ | 6½ | 61 | 22½ | 8½ | 55 | 25 | 5 | 347 | 147½ | 35½ |
| 1772 | 47 | 27 | 3 | 55 | 26 | 5 | 63 | 24 | 6 | 65 | 23½ | 7½ | 62 | 24½ | 6½ | 58 | 23 | 7 | 350 | 148 | 35 |
| Sum. | 236 | 126 | 24 | 282 | 128½ | 26½ | 305 | 120½ | 29½ | 322 | 114 | 41 | 313 | 120½ | 34½ | 289 | 106 | 44 | 1747 | 715½ | 199½ |
| Aver. | 47 | 25 | 5 | 56 | 26 | 5 | 61 | 24 | 6 | 64 | 23 | 8 | 62 | 24 | 7 | 58 | 21 | 9 | 349 | 143 | 40 |
| 1788 | 41 | 22 | 8 | 54 | 27 | 4 | 50 | 27 | 3 | 55 | 20 | 11 | 62 | 25 | 6 | 54 | 20 | 10 | 316 | 141 | 42 |
| 1789 | 43 | 22 | 8 | 52 | 24 | 7 | 55 | 18½ | 11½ | 58 | 17½ | 13½ | 61 | 27 | 4 | 55 | 22 | 8 | 324 | 131 | 52 |
| 1790 | 40 | 24½ | 5½ | 50 | 25 | 6 | 54 | 23½ | 6½ | 56 | 24 | 7 | 55 | 18½ | 12½ | 50 | 20½ | 9½ | 305 | 136 | 47 |
| 1791 | 44 | 21 | 9 | 47 | 21½ | 9½ | 56 | 22 | 8 | 56 | 21 | 10 | 58 | 23½ | 7½ | 56 | 27 | 3 | 317 | 136 | 47 |
| 1792 | 46 | 23 | 7 | 47 | 22 | 9 | 53 | 22 | 8 | 58 | 21 | 10 | 59 | 25 | 6 | 49 | 20 | 10 | 312 | 133 | 50 |
| Sum. | 214 | 112½ | 37½ | 250 | 119½ | 35½ | 268 | 113 | 37 | 283 | 103½ | 51½ | 295 | 119 | 36 | 264 | 109½ | 40½ | 1574 | 677 | 238 |
| Aver. | 43 | 22 | 8 | 50 | 24 | 7 | 53 | 23 | 7 | 57 | 21 | 10 | 59 | 24 | 7 | 53 | 22 | 8 | 313 | 136 | 47 |

TABLE CONTINUED.

| | January. | | | February. | | | March. | | | October. | | | November. | | | December. | | | Amount. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Years. | Ther | Dry | Wet | Ther | Dry | Wet | Ther | Dry | Wet | Ther | Dry | Wet | Ther | Dry | Wet | Ther | Dry | Wet | Ther | Dry | Wet |
| 1768 | 31 | 23 | 8 | 39 | 16 | 13 | 43 | 27 | 4 | 53 | 23½ | 7½ | 40 | 18½ | 11½ | 35 | 19 | 12 | 241 | 127 | 56 |
| 1769 | 34 | 25½ | 5½ | 42 | 22 | 6 | 42 | 23 | 8 | 52 | 24½ | 6½ | 42 | 23 | 7 | 43 | 21½ | 9½ | 255 | 139½ | 42½ |
| 1770 | 37 | 24½ | 6½ | 42 | 23½ | 4½ | 34 | 26 | 5 | 49 | 25 | 6 | 37 | 18 | 12 | 38 | 20 | 11 | 237 | 137 | 45 |
| 1771 | 30 | 27 | 4 | 41 | 25 | 3 | 37 | 26 | 5 | 51 | 18 | 13 | 46 | 23½ | 6½ | 43 | 25 | 6 | 248 | 144½ | 37½ |
| 1772 | 31 | 23 | 8 | 27 | 24 | 5 | 39 | 25 | 6 | 54 | 21½ | 9½ | 46 | 16½ | 13½ | 40 | 26 | 5 | 237 | 136 | 47 |
| Sum. | 163 | 123 | 32 | 191 | 110½ | 31½ | 195 | 127 | 28 | 259 | 112½ | 42½ | 211 | 99½ | 50½ | 199 | 114½ | 43½ | 1218 | 684 | 228 |
| Aver. | 32 | 25 | 6 | 38 | 22 | 6 | 39 | 25 | 6 | 52 | 22 | 9 | 42 | 20 | 10 | 40 | 22 | 9 | 243 | 137 | 45 |
| 1788 | 37 | 28½ | 2½ | 36 | 25½ | 3½ | 36 | 28½ | 2½ | 45 | 29½ | 1½ | 41 | 24 | 6 | 27 | 28 | 3 | 222 | 164 | 19 |
| 1789 | 32 | 24 | 7 | 38 | 20½ | 7½ | 34 | 26 | 5 | 46 | 21 | 10 | 38 | 22½ | 7½ | 40 | 22 | 9 | 228 | 136 | 46 |
| 1790 | 35 | 26 | 5 | 42 | 23 | 5 | 42 | 27 | 4 | 46 | 25½ | 5½ | 36 | 24 | 6 | 34 | 23 | 8 | 235 | 148½ | 33½ |
| 1791 | 35 | 18 | 13 | 36 | 20½ | 7½ | 41 | 27 | 4 | 47 | 22 | 9 | 38 | 21 | 9 | 30 | 27 | 4 | 227 | 135½ | 46½ |
| 1792 | 31 | 26½ | 4½ | 39 | 24 | 5 | 38 | 22 | 9 | 42 | 22 | 9 | 41 | 24 | 6 | 34 | 20 | 11 | 225 | 138½ | 44½ |
| Sum. | 170 | 123 | 32 | 191 | 113½ | 28½ | 191 | 130½ | 24½ | 226 | 120 | 35 | 194 | 115½ | 34½ | 165 | 120 | 35 | 1137 | 722½ | 189½ |
| Aver. | 34 | 25 | 6 | 38 | 23 | 5 | 38 | 26 | 5 | 45 | 24 | 7 | 39 | 23 | 7 | 33 | 24 | 7 | 227 | 144 | 38 |

This table is abſtracted from the journal of a learned and ingenious gentleman, who has regularly kept it, in the centre of this diſtrict, for 27 years; during which time he has accurately noted the ſtate of the weather, the rains, ſnows, &c. which happened every day, the riſe and fall of the mercury in the barometer and thermometer, with other meteorological remarks. In this abſtract, the average heat is taken from the height of the thermometer at nine o'clock in the morning.

When rain, hail, or ſnow, had fallen for the greateſt part of the day, it is called a wet day. If there were only ſome ſhowers in a day, it is made half wet, half dry; but when there were only ſome ſlight drizzling, two of ſuch are made half a day. The ſix months from March to October, the heat of which is neceſſary to raiſe the vegetables cultivated by huſbandmen, are in the firſt part of the table; and the other ſix months, in the beginning and end of the year, in the ſecond. But though this ſhows ſomething of the time and continuance of rain, it conveys no idea of the quantity which fell; nor has it been aſcertained in this country, except by the learned profeſſor of Natural Philoſophy of the Univerſity of Glaſgow, Mr. Anderſon, who has invented, perhaps, the moſt ingenious and accurate rain gage that has yet been known. It receives the rain at a little more than 100 feet above the level of the ſea, and has been regularly kept ſince the year 1781; previous to which the rain was meaſured by an old rain gage. This gentleman has been ſo kind as to communicate the quantity of rain fallen at Glaſgow, for each month and year ſince his apparatus was erected, from which the quantity, for the laſt five years of the foregoing table, is extracted. For the reaſons already aſſigned, the rains are no doubt more copious at Glaſgow, than in the flat country ſome miles up the river; and do not always fall at the ſame period on both places: yet it may be obſerved, that in the months which have the greateſt number of wet days, in the one, the quantity of rain in the other is generally greateſt. The depth of water, which

had fallen in each month, is marked in the columns under the name of the month, in inches and decimal parts.

## TABLE,

*Of the rain which fell at Glasgow, for the five years under mentioned.*

| | Januar. | Febr. | March. | April. | May. | June. | July. | August | Septem | October. | Novem. | Decem. | Sum. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In. Parts | In. Parts | In. Parts | In. Parts | In. Parts | In. Parts | In. Parts | In. Parts | In. Parts | In. Parts | In. Parts | In. Parts | In. Parts |
| 1788 | 2.4 | .98 | 1.72 | 1.68 | .916 | 1.251 | 2.971 | 1.89 | 2.8 | 1.7 | 1.57 | .15 | 19.428 |
| 1789 | 3.9 | 3.91 | .86 | 1.686 | 1.85 | 1.82 | 4.68 | .67 | 3.875 | 2.78 | 2.67 | 6.5 | 35.201 |
| 1790 | 2.07 | 2.81 | .51 | 2.03 | 2.02 | 1.06 | 3.3 | 3.774 | 4.373 | 3.23 | 3. | 4.29 | 31.467 |
| 1791 | 3.97 | 2.4 | 1.12 | 2.219 | Six months here in cumulo 15.29 | | | | | | 4. | 3.106 | 32.105 |
| 1792 | 1.71 | 1.721 | 3.21 | 2.32 | 2.783 | 2.3 | 2.778 | 2.835 | 3.315 | 4.082 | 2.272 | 6.624 | 35.945 |
| Sum. | 14.05 | 11.821 | 7.42 | 9.915 | 7.569 | 6.431 | 13.724 | 8.569 | 14.363 | 11.792 | 12.512 | 20.67 | 154.146 |
| Aver. | 2.81 | 2.364 | 1.584 | 1.983 | 1.892 | 1.607 | 3.431 | 2.142 | 3.59 | 2.698 | 2.502 | 4.134 | 30.829 |

SECT. 4.—*Soil and Surface.*

This county is ſo extenſive, and the ſurface ſo greatly diverſified, that it would be impoſſible to give any tolerable map of ſoils. The upper ward, which is nearly two-thirds of the whole county, is moſtly mountainous, or at leaſt hilly and mooriſh; and from the nature of the ſoil, and the great elevation of the country, not capable of much agricultural improvement: between two-thirds and three-fourths of its extent may be comprehended under this deſcription. The wide pariſhes of Crawford and Crawfordjohn, the greateſt part of Lamington and Coulter, are high and rugged. Three-fourths of Douglas and Leſmahagow, on the one ſide, and of Dunſire on the other, are either mooriſh heathy land, or covered with beds of peat earth, yielding but little uſeful herbage. A conſiderable part of the pariſhes of Carluke, Carſtairs, Lanark, Carnwath, Walſton, Dolphinton, and Biggar, is of much the ſame quality.

At the head of the county, where it bounds with that of Dumfries, the country is very mountainous. The great edifices of nature are ſo cloſely huddled together, that their grandeur is loſt to the eye of the beholder. When he traverſes the hollows, only the ſides of the neareſt mountains are preſented to his view; if he climbs an eminence, he ſees nothing but a confuſed group of rugged tops, with the naked rock frequently appearing among the herbage. The elevation of this tract is very great, the ſite of the village of Leadhills being computed to be 2000 feet above the level of the ſea, and the top of one of the *Lowthers*, a ridge of hills near that place, has been found to be 1100 feet higher, making the height of the ſummit 3100 feet.

In proceeding down the Clyde, the proſpect opens; the hills ſtand at a greater diſtance from one another, and the aſcents are leſs abrupt: villages, farms, corn fields, and plantations of trees, appear among the eminences; and the mixture of hill and dale forms a ſcene at once ſimple and ſublime. The nature of the ſoil, however, is not always

more fertile, as the elevation becomes leſs. The paſtures on the heights of Crawford are ſuperior to thoſe of Douglas or Dunfire. The former are upon hard rock, and many of them pretty dry, covered with a thick mixture of ſhort heath and ſweet graſſes; ſometimes a cloſe verdant carpet, with very little heath. The latter are frequently wet and ſpongy, and their herbage thin and coarſe. As the hills decline in height, the rock more ſeldom appears on the ſurface; and beds of gravel, of a conſiderable depth, are ſometimes ſeen.

Tintoe, or Tintock, is the laſt great hill to the north, and forms the boundary of the hilly diſtrict on that ſide. The height of this hill is about 2260 feet above the level of the ſea; and the medium height of the arable land around its foot from 600 to 700 feet. From Tintoe, the face of the country is ſoftened down to gentle elevations and depreſſions; and the Clyde ſlowly glides, with many windings, through a tract of beautiful meadows, for above a dozen of miles, till it arrives at the head of the celebrated falls. From thence, it ruſhes from cataract to cataract, foaming among the fragments of rock for about ſix miles; and regains its quiet bed and gentle motion in the lower part of the upper ward. The uppermoſt fall is that of Bonnington, where the river precipitates over the edge of a perpendicular rock. The height of this, including a little one immediately above it, is about 30 feet. The ſecond fall is that of Corhouſe, over which the river daſhes from one ledge of a ſhelving rock to another. Its perpendicular height is 70 feet. Dundaff fall is 10 feet; and there are three diſtinct falls at Stonebyres, ſucceeding one another, which meaſure together about 70 feet.

The principal part of the arable land above the falls is in the pariſhes around Tintoe, which lie along the ſide of the river. The ſoil of the meadows by the river ſide, formed by the ſlime depoſited in floods, is of the nature of carſe ground, with a greater or leſs mixture of ſand, in proportion to the quicker or ſlower motion of the ſtream, by which

it has been depoſited. Theſe meadows are very fertile, and are ſtill receiving additions from the inundations of the river. But this cauſe of fertility is alſo the cauſe of frequent and conſiderable damage, the inundations ſometimes deſtroying the crops, ſhifting the courſe of the river, carrying away the rich ſoil, and leaving beds of ſand and gravel in its ſtead. The uplands, with the exception of ſome few places where ſprings ariſe, are dry and very fertile, generally of a light and friable quality, with an under ſtratum of ſand or gravel of a conſiderable depth. Some places occur which have not been ſweetened by culture, and have a ſterile appearance:—others, where the ſoil is either mooriſh and ſpongy, or ſomewhat of an argilaceous quality, having an impervious under ſtratum. This laſt is more frequently the character of the land which lies diſtant from the river.

From the beginning of the falls downward, the ſtyle of the country is altogether changed. Inſtead of the baſaltic or whin rock ſtanding in perpendicular columns, the free-ſtone rock, lying in horizontal ſtrata, begins to take place. The ſubſidence of the land does not keep pace with the fall of the Clyde. From a mild and calm river, ſoftly flowing through level meadows and wide expanſive banks, it becomes an impetuous torrent, deep ingulfed in a double range of ſteep hills, ſeeming impatient of its ſtraitened courſe. The brooks which fall into it are ſomewhat of the ſame character. The ruſhing waters, the lofty and diverſified rocks, the towering ſummits, the overhanging woods, exhibit altogether a ſcenery, in which the beauties of nature are happily blended with her grand and ſublime works, and form a proper ſubject to warm the imagination, and exerciſe the genius, of the poet and the landſcape painter; but it is the buſineſs of agriculture to dwell on plainer ſcenes.

The greateſt part of the arable land in the pariſhes of Lanark and Leſmahagow, is dry, light, and friable, though much leſs fertile, ſomewhat reſembling that in the neighbourhood of Tintoe, already deſcribed. In the lower part of the latter, the clay ſoil takes place; and much of the ſoil

of Carluke parish is either of a clay nature, or has a dense argilaceous bottom. A great deal of it is damp, cold, and barren; but some of it is of a very good quality; and that verge of the parish which lies along the Clyde, is not less fertile in soil than rich in picturesque beauties.

Towards the lower part of the upper ward, though the soil in general is less fertile, the country becomes more interesting. Handsome seats, surrounded with well dressed fields, sheltered with clumps and belts of trees, are frequent; villages filled with industrious inhabitants, arise on all sides; and the efforts of those people, for their own accommodation, are continually giving beauty and fertility to some new spots. The course through which the Clyde flows gradually opens; the river expatiates, and gently purls over its pebbled bed, through alternate tracts of sloping banks and fertile valleys, ornamented sometimes with a mixture of orchards and copse-wood, sometimes with tufts of forest trees.

At the commencement of the middle ward, the loftiness of the land is considerably diminished, and it still continues to fall to the N. W. The whole face of the country, when beheld from any distant height, appears like one great plain. Plain, however, is not the character of the county of Lanark. The surface is every where diversified by wavy inequalities, scarce a plain of any considerable extent intervening, except the valleys along the sides of the river; from which the surface, as it recedes, rises irregularly to the highest ridge, on each side, near the confines of the county. The height of these ridges, if a few particular summits of no great importance be excepted, is not more than 700 feet above the level of the sea. The site of the town of Hamilton, on the low ground, in the centre of the middle ward, is computed to be from 100 to 140 feet. The medium height of the cultivated land will probably be from 250 to 300 feet.

Although there is a great diversity of soil in the middle ward, it is most generally of a clayey nature, with a greater or less intermixture of sand, and very different in colour, conformation, and degrees of fertility. The bottom is a solid

argilaceous ſubſtance, ſometimes ſeemingly homogeneous, and lying in regular horizontal laminæ, but oftener of a mixed nature, without the appearance of diviſions in any direction, and commonly mixed with little roundiſh ſtones of different ſizes and appearances. Sometimes a little tract of ſandy or gravelly ſoil occurs; and when a bed of this open quality is of a tolerable depth, the land is dry; but wherever the clayey under ſtratum approaches near the ſurface, which frequently happens, the ſoil is ſoft and wet. At ſome diſtance from the river is frequently found, lying upon a clay bed, a thin looſe ſoil, much diſpoſed to heave with the viciſſitudes of the weather, and very unfit to furniſh either nouriſhment, or a ſufficient hold to the roots of plants. The black or grey ſoil, on the high mooriſh grounds, is ſomewhat ſimilar to this, but generally bears a good deal more graſs. The water-formed ſoils in the valleys, by the ſides of the river and ſome of the other conſiderable ſtreams, differ greatly from all the above mentioned, being naturally more fertile, deeper, and generally leſs apt to be injured by rain, as they lie upon a bed of open gravel. They differ alſo from one another, according to the nature and proportions of the materials of which they have been originally compoſed. The rich mellow earth, which, by ſome people, has been diſtinguiſhed as a ſpecies of ſoil, under the name of *loam*, being the reſiduum of decompoſed vegetables continually accumulated, may be a part of any ſoil, where circumſtances have occaſioned this accumulation, and will be more or leſs fertile in proportion to the nature and quantity of the vegetables which have produced it, to the quality of the ſoil upon which it has been ingrafted,—to the bottom on which it lies,—and to the expoſure and elevation in the atmoſphere. Accordingly, we find theſe loamy ſoils, in different places, poſſeſſing very different degrees of fertility. They are either in thoſe fields near farm-houſes, where the farm dung has been long repeatedly applied, called *old crofts*, or on dry bottoms, where leaves of trees and ſweet herbage have long been allowed to rot, or where the ſame

ſubſtances have been carried down by ſtreams, and lodged in the valleys. The beſt of theſe are where the original ſoil is at the ſame time firm and friable, and the bottom open and dry.

Beſides the above mentioned kinds of ſoil, a conſiderable part of the ſurface is covered with beds of peat earth, which have overwhelmed the original ſoil, and aſſumed its place. Theſe are chiefly of two kinds, the one generally of a moderate thickneſs, compoſed ſolely of decayed vegetables, nouriſhed by a cold watery ſoil, and damp atmoſphere. As thoſe vegetables, which are nouriſhed by a genial heat and kindly ſoil, are quickly ſuſceptible of the putrid fermentation, and in rotting fall into loam; ſo thoſe that thrive in cold moiſture, have ſomething in their nature, which, in a great meaſure preſerves their form and bulk, even in decay; and by the growth of one year above another, through the lapſe of time, in a neglected country, they accumulate into beds of this inflammable earth. Almoſt all the tribe of *Moſſes*, (Muſci) and ſome other coarſe aquatic plants, are of this nature; and hence, perhaps, thoſe accumulations have got the name of *moſs*. When thoſe beds lie on low ground, where water can carry particles of heavy earth upon them, they are thus rendered leſs porous, and produce a conſiderable quantity of graſs; when they are on riſing ground, heath *(erica)* and deerhair *(ſcirpus ceſpitoſus)* are the chief productions. Some of theſe have been drained, pared, and burnt, and produced pretty good crops of corn and graſs. The other kind lies generally in plains or hollows among the eminences, and is generally of a great depth. It is evident that all of them, in former times, have been foreſts of large trees; ſome of which having fallen down acroſs the water courſe, and intercepted whatever was brought along by the ſtream, muſt have formed dams; which, ſtopping the water, would convert the whole into a ſtanding pool. In this manner the trees would die, as the ſtanding water prevailed over their roots, and the whole foreſt at length became proſtrate.

Over theſe, moſſes, and a variety of aquatic herbage, have

grown, from age to age, till they are ſwoln to great maſſes of ſpongy matter; theſe are called *Flows* or *Flow-moſſes*; they are much more extenſive in this diſtrict, than the other, and in a country where coals abound, of very little uſe, neither producing much eſculent herbage, nor admitting cattle to go ſafely in queſt of it. At the ſame time they may almoſt be ſaid to be irreclaimable. Only two methods have hitherto been propoſed for this purpoſe; the one is to lead ſome brook to the place, and to float away the ſpongy ſurface, in the water, by cutting it into fragments with ſpades. The bottom after being properly drained and cultivated, is capable of producing corn or graſs. The other is to drain the whole ſufficiently, to ſmooth the ſurface by pairing, burning, &c. and then to give a thick top dreſſing of any kind of heavy earth, ſuch as ſand, ſmall gravel, or clay, and perhaps clay is the beſt. This ſoon covers the whole with verdure, and may be repeated from time to time, as occaſion requires. It is an improvement to ſtir the ſurface by turning it with the plough, after it has acquired ſolidity, ſo as to mix and incorporate the different kinds of earth. The firſt method has not been practiſed in this country, except in the making of drains. The ſecond has been followed in ſome few inſtances, with conſiderable ſucceſs; and there is the more encouragement to continue it, that when the moſt barren clayey ſubſtance, dug at a great depth below the ſurface, in which all vegetables die while it lies in a maſs, when ſpread over the moſſy ſubſtance, will, in a year or two, produce white clover and other ſweet herbage *. But, alas! what labour would be ſufficient to ſubdue the ſterility of ſuch extenſive waſtes! the moſſes of the middle ward being, as nearly as can be computed, about 42,000 acres, which is almoſt a third of the whole extent of the diſtrict. Spots occur on the lower ground, on which another kind of moſſy earth is found, formed by cold ſprings, ariſing on the ſur-

* An important diſcovery has been lately made, in a neighbouring county, with reſpect to the reclaiming of moſſes;—ſome notice of which ſhall be taken in a future chapter.

face, and encouraging the growth of thoſe plants, of which this kind of earth is compoſed; but theſe are of very inconſiderable extent.

Having now mentioned the different ſoils to be found in the ſubdiviſion of the county of which we are now treating, it may be proper, in order to give a better idea of it, to take a more particular view. The higheſt ridge on the north ſide runs along the eaſtern extremity of Cambuſnethan pariſh, through the middle of that of Shotts, where this ridge is pretty high and rocky, and thence through Eaſt Monkland pariſh, declining a little as it proceeds weſtward. In theſe three pariſhes, particularly in that of Shotts, lies the greateſt part of the *moſſes* to be found on this ſide the river. Much of the reſt of the ſoil along this ridge is mooriſh, coarſe, and wet. All of it, however, is not of ſo bad a quality. Along the Calder, which divides the pariſhes of Cambuſnethan and Shotts, there is a tract of pretty good ſoil on both ſides. Near the head of this ſtream, it is light, ſandy, or gravelly, and pretty dry; farther down it becomes a ſtrong clay. Many fields in Eaſt Monkland, though high, are tolerably fertile; ſome inclined to ſand, ſome to clay, a conſiderable part is of a grey mooriſh ſoil, and ſome of a mixed nature. This tract is interſperſed with ſpots of paſture and marſhy meadow, ſaved annually for hay. The oppoſite ridge, beginning on the pariſh of Avondale, is a continuation of the hilly range, which divides the pariſhes of Douglas and Leſmahagow from Ayrſhire, and runs from Avondale, through Kilbride, Cambuſlang and Carmunnock, to the county of Renfrew. The wilds here are much more extenſive than thoſe on the north ſide of the Clyde. Through a tract of twelve miles long, and ſometimes a conſiderable breadth, there is ſcarce any thing but moſſes and benty or heathy paſture, very wet and coarſe; a mixture here and there is ſomewhat drier, and may be called green. The arable land of Avondale is but a ſmall proportion of the whole, lying in the lower part of the pariſh. It is moſtly of a gravelly nature, and frequently encumbered with ſprings ariſing

on the ſurface. Many fields may be ſaid to be fertile, and particularly produce abundance of good graſs, when left untilled. Above three-fourths of the pariſh of Kilbride are arable, the ſoils are various. On the S. E. boundary is a free ſoil, lying upon an open hard rock, pretty fertile; more to the N. and W. it becomes a ſtiff moiſt clay; on the weſt ſide the ſoil is a happy mixture, and very productive. Through theſe two pariſhes, conſiderable tracts of level meadows are interſperſed among the cultivated fields; on ſome of them the ſpret *(juncus articulatus)* prevails; others, particularly thoſe which have had the ſoil enriched by the overflowings of ſome neighbouring brook, producing abundance of ſweet hay. The pariſhes of Stonehouſe and Glasford, along the banks of the Avon, are moſtly arable. The banks of this river, from its head, till it has paſſed thoſe pariſhes, is deſtitute of copſe wood; and the country has a plain, but not unpleaſant paſtoral appearance. The ſoil is tolerably good. In Stonehouſe is a good deal of ſandy ſoil, pretty dry, and of a pleaſant improveable quality. In Glasford it is more frequently gravelly, moſtly dry, but ſprings ſometimes occurring. As the land recedes from the Avon, on both ſides, the argilaceous bottom approaches nearer the ſurface, and is covered, either with a grey mooriſh ſoil, or a ſoft earthy clay, frequently thin and moiſt. In the high part of Glasford, there is a conſiderable extent of moſs. In all hollows among the high grounds, on both ſides of the county, the common ruſh *(juncus conglomeratus)* prevails very much.

What part of the middle ward remains yet undeſcribed, viz. the lower part of Cambuſnethan, the pariſhes of Dalziel, Bothwel, and Weſt Monkland on the north ſide of the Clyde, and thoſe of Dalſerf, Hamilton, and Blantire on the ſouth ſide, lie pleaſantly ſloping towards the river on both ſides. The length, along the banks, is upwards of twelve miles, and probably near half that in breadth, and is perhaps a tract not inferior in beauty to any other in Britain. At the head of this tract the banks of the Clyde have already

expanded, and continue to open downward to its confluence with the ſouth Calder, admitting valleys of varied breadth along the ſides of the river. Here again the ſcene varies, and bold banks, in the pariſhes of Bothwel and Blantire, hem it in on each ſide. From thence they expand and contract alternately to the extremity of the county, exhibiting every where a beautiful variety. The ſame great materials, —flowing waters, winding valleys, and ſwelling banks, form the ground-work of the landſcape, both above the falls and in the lower part of the county; but the finiſhing of the one is entirely different from that of the other. In the former, nature appears in the elegant ſimplicity of a handſome undreſs; in the latter, magnificently arrayed in her richeſt ornaments. The ſoil and climate ſeems to be much diſpoſed to the growth of wood, and ſpontaneous copſe woods every where fringe the hanging banks. Beſides the eſtates of great land-holders, much of the land is parcelled out in moderate and ſmall properties. The induſtry and judgment which ſo many people of all ranks have exerted, to ſhelter their properties, and adorn their places of reſidence, have diſperſed, over the face of the country, groupes of trees, appearing in a beautiful diſorder, as if ſcattered by the hand of chance. Numerous villages and hamlets contribute to enrich the ſcenery. The labours of a number of huſbandmen, employed in the improvement of the fields, has produced a verdure which ſmiles almoſt perpetually in different corners, to whatever quarter the eye is turned. Orchards emboſomed in woods, ſtand all along the Clyde, by the foot of the riſing ſlopes:—thus that beautiful variety, which the face of the country has received from the hand of nature, is every where heightened and improved *.

The different kinds of ſoil, found in this tract, have been already enumerated. The valleys are very fertile, but bear a ſmall proportion to the whole. Clay is the moſt prevalent ſoil, and a great deal of it is very productive, with at-

* Beauties of a caſt ſomewhat more romantic, on the banks of the inferior rivers of Avon, S. N. and W. Calders, are frequent.

tentive culture and favourable ſeaſons. Sandy and gravelly ſoils are rare. The looſe heaving ſoil above mentioned, is to be found in ſome of the higher grounds, and is of the worſt quality, perhaps, of any. There are no moſſes, except on that ſide of the Weſt Monkland pariſh which lies fartheſt from the Clyde. In this pariſh there is more ſandy ſoil than in any other part of the tract. But what proportion there may be of each of theſe kinds of ſoil, in a country ſo diverſified, it is ſcarcely poſſible to form a judgment.

The under ward is a very limited diſtrict, but having the city of Glaſgow ſituated in it, a very important one. The banks of the Clyde, though abounding leſs in natural beauties than thoſe above, are ſtill more highly ornamented, being planted all along with handſome villas, the Summer retreats of the wealthy inhabitants of Glaſgow, who, in their relaxations from buſineſs, have highly improved a conſiderable part of this tract. A rocky eminence, called *Dichmount*, occupies a part of the pariſh of Cambuſlang. The ſoil upon and around it is light and ſtony; that of the reſt of the pariſh is moſtly clay, excepting that border which lies along the Clyde. The ſoil of Carmunnock pariſh is much the ſame with that of Cambuſlang, but leſs improved by culture; and as the firſt does not approach the Clyde, the rich ſoil along the river is wanting. But the ſame ridge of hard rock runs through it, and is, in ſome places, almoſt deſtitute of ſoil. The higher part of Rutherglen pariſh is clay; the lower is either ſandy, or rich valley ground, along the ſide of the river. Except a little clay on a riſing ground, the pariſh of Govan is ſand, originally of a very poor quality, but now highly improved, and moſtly by the preſent race of inhabitants, whoſe local ſituation furniſhes them, not only eaſy acceſs to the dung of Glaſgow, but ſtrong motives to apply it.

It was here that the late Mr. Croſs, ſheriff-depute of the county, about 40 years ago, made his experiments in Tull's ſyſtem of horſe-hoeing huſbandry, and cropping continually without manure. This he purſued with great perſeve-

rance, and at length was convinced, that the land required to be recruited from time to time. He was a man of great judgment and attention; and is allowed to have been the firſt who rouſed that ſpirit of improvement in the neighbourhood, which has ſince been ſo ſucceſsfully exerciſed. The barony of Glaſgow is wonderfully diverſified; the haughs (valleys) of Dalmarnock, &c. are fertile to a proverb. The north ſide of the pariſh riſes in knolls, the tops of which are frequently hard and ſtiff, the bottoms wet and ſpongy. In many places the ſoil originally has been but indifferent, but its faults are much corrected by an uncommon degree of culture, to which the local ſituation gives great encouragement. The middle of Calder pariſh is barren, moiſt, and mooriſh; around the outſide is a great deal of good ſoil, moſtly light, and pretty dry.

Having now traverſed the ſurface of the county, this article may be concluded, with a few general obſervations. Land in the ſame parallel, other circumſtances being nearly ſimilar, is always more valuable, in proportion to the comparative lowneſs of its ſituation; thus, for example, land on the elevated fields of Avondale and Kilbride on the one ſide, and of Cambuſnethan and Shotts on the other, are proportionally leſs valuable than ſuch as lie in the low tract between them, inſomuch as they are higher ſituated; the quality of the herbage being leſs ſucculent and nouriſhing, and the reproduction ſlower, when in graſs, and the grain leſs plump and perfectly ripened, and the harveſt later, when in corn. The ſame thing holds good in every other parallel through the county. The nature of the bottom or under ſtratum has the ſame kind of influence as the elevation; moiſt ſweating bottoms producing grain of inferior quality, and ripening late. Theſe obſervations, ſeemingly ſo trite and obvious, might have been avoided, had it not been for what follows. The arable land along the Clyde, above the falls, ſeems to be ſuperior to any in the lower part of the county; not only to thoſe fields, nearly on the ſame level, on the ridges of the country, but exceeding, in

real intrinſic fertility, the fine low grounds which are 400 or 500 feet leſs elevated. The meadows or valleys of the former, by the river ſide, are cropped and left in graſs, for a few years alternately, and without receiving any manure, continue to yield abundant harveſts. The uplands, when properly freed of weeds, are very productive, with half the manure which is found neceſſary in the lower part of the county; and the harveſts are generally earlier. One circumſtance, however, tends greatly to diminiſh the difference of the comparative value of land in theſe different diſtricts. The ſpring, but more eſpecially the autumnal froſts, are more frequent, and more intenſe, in the upper country than in the lower. Thoſe calamitous mildews, ſometimes, in the month of Auguſt, fall down from the ſides of the mountains, condenſe at the bottom, and ſweep ſlowly along the valleys of the upper ward, blaſting the harveſt wherever they come; while the opener country below, perhaps eſcapes, and the corn ripens ſlowly to a tolerable harveſt. Such froſts are ſaid to be more frequent theſe laſt 30 years than formerly, and particularly ſince 1782. The narrower the valleys, their effects are more ſeverely felt; ſo that among the thick cluſtered hills, near the upper extremity of the county, tillage is almoſt abandoned.

## SECT. 5.—*Minerals.*

As the bowels of the earth are ſometimes not leſs productive than its ſoil, and contribute conſiderably to the value of the land; and as the working of mines has important effects on the culture of the ſurface, ſome account of the mineral ſtrata ſeems to be entitled to a place in this report.

Paſſing the earthy ſubſtances, which lie immediately under the ſoil, the firſt thing which attracts attention is the rock. This is of three general claſſes, namely, the *Sand Stone*, or *Free Stone*,—*Lime*,—and the *Hard Rock*, known in this country by the name of *Whin*. Each of theſe is of ſeveral different qualities and appearances, and

may be ranked under various ſubdiviſions; but it will not be neceſſary for the preſent purpoſe, to take up ſo much room in this report, as the mentioning of all theſe ſubdiviſions would require.

From the lower extremity of the county upwards, to above the falls of the river, ſome kind of free ſtone is the moſt general rock; nevertheleſs, different ridges of whin run along through the heights, on both ſides, appearing ſometimes on the ſurface, by which theſe ridges may be traced from the rocky mountains downward, through the whole extent of the county. The free ſtone is continued probably through all the plainer parts of the country, but the regularity of the ſtrata is frequently interrupted, and one edge ſunk deep, while the other is raiſed. It is found all along the river and the ſtreams which fall into it, frequently approaching near the ſurface, and is much uſed in building.

Lime lies in the ſame tract of country as the free ſtone, but is only found, near the ſurface, in places which are ſomewhat elevated, after the free ſtone, and many of the ſtrata below it, to be after mentioned, have ſkirted out at the ſurface, and are no longer found. It is moſt frequent on the ſouth ſide of the river, viz. in the pariſhes of Kilbride, Avondale, Glaſford, Stonehouſe, Leſmahagow, Douglas, and the higher part of Hamilton; on the north ſide it is found in Carnwath and Carluke pariſhes. Both thoſe kinds of rock lie in a poſition nearly horizontal.

The great body of whin rock is in the upper part of the county, ſtanding in perpendicular columns or thin laminæ on edge. It is moſtly ſo in the lower ridges; but there are inſtances of it lying horizontally, like the free ſtone and lime. It is of a cloſe texture, and compoſed of very minute particles. Whether it be, as ſome have ſuppoſed, the lava of ancient volcanos, or whatever have been its origin, it differs widely in its nature from free ſtone; and this difference may probably be the cauſe of the difference in the fertility of the ſoil between the upper and lower

parts of the county, above noted. The moſt ſolid bodies, after they ceaſe to increaſe, tend, leſs or more, towards diſſolution. Even thoſe hard rocks exfoliate; and wherever the decompoſed matter lodges, its fertility is ſhown, by the deep verdure which ariſes; whereas reduced free ſtone ſhows no ſymptoms of fertility. It is reaſonable therefore to expect, that the ſoil, with which different cauſes muſt have contributed to mix a great deal of the former, ſhould be more fertile than that which has always a conſiderable mixture of the latter.

Under the free ſtone lies the coal, for which Clydeſdale is celebrated. A number of thin ſtrata, or ſeams, as they are generally called, of this valuable foſſil, lie above that which is generally called, around the city of Glaſgow, the *upper coal*; becauſe it is the firſt that is found worth digging, to any extent. This ſtratum is compoſed entirely of what is called *rough coal* in Scotland, except a ſmall part near the middle of it, of the kind called *ſplint*. 2*dly*, About 16 or 17 fathoms under this, lies the *ell coal*, ſo called, becauſe it was firſt found of this thickneſs, but it is frequently from 4 to 6 feet thick. It is compoſed of two kinds, called *yolk* and *cherry* coal, with ſometimes a parting of ſplint, and ſometimes not. This is a fine caking coal, or what is called in England, a cloſe burning coal, and is much eſteemed for the blackſmith's forge. 3*dly*, At from 10 to 17 fathoms below the laſt, lies the ſeam, called the *main coal*, ſo called from its poſſeſſing all the good qualities found in any of the other ſtrata in the county. It contains *rough* coal, *ſplint*, and *parrot*, or *jet coal*, and is preferred, by the conſumers, to all the others, as the moſt profitable. Its thickneſs is from 3½ to 9 feet. Sometimes a thin bed of ſtone is found about the middle of the ſeam, and the whole thickneſs is 10 feet. 4*thly*, About 13 or 14 fathoms lower, lies the *humph coal*. It conſiſts of *yolk* and *rough* coal, with a thin parting of *ſplint*. In ſome places it is without the ſplint, and unworkable, being much interlaced with thin laminæ of ſtone, and a

kind of petrified black clay, called *blaiſe*. *5thly*, Below the humph coal lies the *hard coal*, ſometimes at 14 fathoms diſtant. It conſiſts ſolely of ſplint and parrot coal, and is found to be the beſt in the county for the ſmelting of iron. It is alſo very good for family uſe. *6thly*, At a fathom and one half lower, is found the *ſoft coal*, from 30 inches to 6 feet thick. It is compoſed of the rough, yolk, and cherry coals, cakes much in burning, and is eſteemed a good coal for the blackſmith's forge. *7thly*, About 13 or 14 fathoms below this, lies a coal, called, about Glaſgow, the *four milk coal*. As it burns ſlowly, and affords but a weak heat, it is what the miners call a lean coal, and has therefore been but little wrought. There are a number of thin ſeams of coal under the four milk coal, all of a lean quality, and generally much interlaced with laminæ of ſtone, blaiſe, or ſhiver. Under the laſt mentioned have been found ſeveral ſtrata of excellent lime; and more of the thin ſeams of coal again have been diſcovered under the lime; but all of them, which have yet been tried, are of a lean quality. The lime found near the ſurface, on the elevated grounds, is ſuppoſed to be a continuation of ſome one or other of the laſt mentioned ſtrata found under the coal, which, in the courſe of their natural riſe, have come within reach, in the places where the ſuperincumbent ſtrata of coal, and all its accompanying foſſils, did not exiſt; as lime, worth the working, has never yet been diſcovered above thoſe coal ſtrata, nor in any place till after all the valuable known ſeams of coal had ſkirted out at the ſurface: and any coal, which has been found under the ſurface lime, is of the ſame lean quality with that which lies under the deep buried ſtrata of lime.

The above is the number and order of the coal ſtrata, every where along the Clyde, where they are entire. However, this is not always the caſe. All the mineral ſtrata lie inclining towards the river on both ſides, generally ſomewhat obliquely, and with various degrees and directions of declivity, riſing, as they recede from it, till they

ſkirt, or, as it is expreſſed by miners, crop out, one after another; ſo that the firſt coal which is found in ſome places, is perhaps the third or fourth in the above mentioned order. Theſe are diſtinguiſhed by the name of the Clyde ſtrata, or ſeams of coal, and not only lie along the ſides of that river, through all the plain country, but branch out leſs or more along the principal ſtreams, on ſome of them to a great extent; lying in the thinly inhabited parts, almoſt untouched, and affording the public the proſpect of an almoſt inexhauſtible fund of fuel, whenever the projected canal ſhall take place. Beſides theſe, there are other ſeams of coal in the county, of a ſomewhat different nature. In the pariſh of Shotts, a fine yolk coal is wrought, reſembling the coal found upon the ſides of the Forth, and ſuppoſed to be a continuation of one of the ſame ſtrata. Upon the ſides of the Douglas river are extenſive coaleries, which ſupply ſome of the more ſoutherly provinces, where this fuel is wanting. The coal here is alſo ſimilar to that on the Forth. On the S. W. boundary of the county is coal of the ſame quality with that wrought on the coaſt of Ayrſhire. It crops out at the ſurface about the middle of Avondale pariſh.

There are ſtill ſome other variations in the coal ſtrata, which merit attention. Near the northern boundary of the county, a ſpecies is found, diſtinguiſhed by the name of the *blind coal*, from its burning with intenſe heat without flame. This muſt no doubt have been deprived of its fixed air, by means of ſubterraneous fire. It is uſed for the ſame purpoſes as coke, and even preferred to coke artificially made, its effluvia being ſtill leſs offenſive. The blind coal is always found under a covering of horizontal whin; and when the ſame ſeam is traced, till it comes under the free ſtone rock, its qualities are entirely changed, and it becomes, in every reſpect, the common pit coal *. Another ſpecies of coal, the qualities of which are directly

* The blind coal found in Ayrſhire, in the neighbourhood of Kilmarnock, is ſaid not to be covered with whin, but ſchiſtus.

oppoſite to thoſe of the laſt, is found in different parts of the county; it is here called the *candle coal*, or *light coal*, and is ſaid to be the parrot or jet coal of the third ſeam, in the above enumeration, diveſted of the other kinds which accompany it, when the ſeam is complete. But when this is found alone, it ſeems to be ſtill more exquiſitely inflammable; it takes flame the moment it is brought in contact with the fire, and a ſmall fragment of it may be carried about in the hand, like a flambeau, and continue for a long time to give a vivid light.

Iron is another mineral which abounds in this county. It is got only in a petrified ſtate, what is called the ore not having yet been diſcovered, in ſuch quantities, as to attract the attention of the miner. The iron ſtone is either found in beds of unconnected balls, or in a continuous rocky ſtratum. The balls are the richeſt. Iron ſtone is found in the ſame tract of country as the coal, and is the conſtant concomitant of that foſſil, many beds lying between the different ſeams of coal; and, it is ſaid, the beſt lies over the fifth ſeam, called the hard coal. Works have been eſtabliſhed, for extracting iron, in three different places of the county. Although none of them yet have made malleable iron, the metal is not only extracted in its firſt manufactured ſtate, called pig iron, but moulded into various forms for many different purpoſes *.

Among the mountains, near the ſouthern extremity of the county, are the well known lead mines belonging to the Right Hon. the Earl of Hopetoun. In the ſame neighbourhood, a vein of copper ore was found, and ſome attempts made to work it, but without ſucceſs. Here alſo a vein of antimony has been lately diſcovered; how it may turn out is not yet known. There are abundant quarries of excellent ſlate among theſe mountains; but the diſtance from the populous parts of the country is ſo great, there is no encouragement to work them to any conſiderable extent.

* At one of the iron works, ſome progreſs towards making malleable iron has been made. A forge is erected, and the iron brought to that ſtage called *blooms*.

Lime is uſed either as manure for the land, for the purpoſes of building, or as a flux in the ſmelting of iron. Two hundred and ſixty labourers are employed in the different lime quarries, and lime is raiſed annually to the value of about 12,500l. About 2000 people are employed about the coal mines, and the quantity of coals produced annually, is about 765,000 tons: 100,000 tons of theſe are exported down the river, and eaſtward along the canal; 36,000 tons are conſumed in the iron works; a quantity, which cannot be aſcertained, goes away by land carriage, to other counties; the reſt are conſumed either in the other manufactures of the county, or for family uſe. The three iron works employ, in mining iron ſtone, and extracting the metal, about 500 hands, and produce about 3,600 tons of pig iron annually. The produce of the lead mines is different, in different years, varying from 18,000 to 50,000 bars of lead, according to the ſucceſs of the diſcovery. The number of inhabitants in the village of Leadhills, is from 1000 to 1300, all of them either actually employed in the mines, or depending on the produce of them for ſupport.

Thus the labour of about 4000 * people in the mines of this county, produces the following revenue:

| | |
|---|---|
| Lime, - - - - - - - | L. 12,500 |
| 765,000 tons of coals, at 4s. per ton, - | 153,000 |
| 3,600 tons of pig iron, at 6l. 10s. per ton, - | 23,400 |
| 34,000 bars of lead, ſuppoſing the average between the extremes, at 1l. per bar, - | 34,000 |
| | L. 222,900. |

## Sect. 6.—*Water.*

There are a great many lakes in different parts of the county, none of which are ſo remarkable for extent, or any

* Beſides the ordinary miners and workers at furnaces, &c. a number of other people are incidentally employed, ſuch as, artificers, in making machinery, labourers, upon diſcoveries and other extra works, carters, in bringing materials to hand, &c.

circumſtance attending them, as to merit a particular deſcription; and an enumeration of the whole would be tedious and unintereſting. All of them contain ſome kinds of fiſh, ſuch as trout, pike, or perch, &c. and are ſometimes reſorted to by anglers; but the quantity of food thus obtained is inconſiderable.

The Clyde and its tributary ſtreams make the principal figure under the article of water. The main ſource of the river riſes in the ridge of mountains which ſeparate the county from that of Dumfries. It is there called the Daer, and flows for ſeveral miles under that name, till it is joined by a little brook, called the Clyde, and from thence downward, has always the name of the Clyde. The principal ſtreams, by which it is joined in its courſe, are the Deninten, the Douglas, the Nethan, the Avon, and the Weſt Calder, on the ſouth ſide; the Medwain, the Mouſe, the ſouth and north Calders, and the Kelvin, which divides the county from Dumbartonſhire, on the north ſide.

The river is navigable only to Glaſgow. After which, beſides a number of corn and other mills, it drives the machinery of two large cotton ſpinning works, at Lanark and Blantire. In great rains, particularly theſe which come from the S. E., it is ſometimes ſwoln to a great height, and does conſiderable damage, more eſpecially in Autumn, when the crops on the valleys by the river ſide are ſwept away, or much injured. The higheſt land flood remembered was that of the 12th of March 1782, when the river roſe from 16 to 24 feet above the level of low water, according to the expanſion or contraction of the banks in different places. In ſome places, the valleys have lately been fenced againſt inundations, by ſloping banks of earth faced with graſſy turf.

Moſt kinds of fiſh, which are found in the other rivers in Scotland, are alſo found in the Clyde, particularly the ſalmon. But though the river, from the foot of the loweſt fall to Glaſgow, runs, for about 20 miles, moſtly on a bed of fine gravel, abounding with ſhoals and proper ſpawning

places for that fiſh, and the ſmall rivers alſo affording many places for the ſame purpoſe; there are perhaps few rivers of the ſame ſize leſs ſtocked with ſalmon. This is probably owing to the populouſneſs of the country. Since the more numerous the population, there is likely to be the more people, in proportion to the number of fiſh, diſpoſed to deſtroy them, at improper ſeaſons, and conſequently the deſtruction is greater. The fiſh are not only improperly and waſtefully deſtroyed at the time of ſpawning, when many thouſands periſh at one blow, but through the Spring and Summer, numbers of thoughtleſs people ſwarm along the ſides of the river, angling, and kill more fry, at three or four inches long, in one day, than all the grown fiſh caught in a ſeaſon. It is probable that, if this waſte could be checked, the river would ſoon become a conſiderable ſource of food and revenue to the inhabitants. The proprietors of the fiſheries on the Tweed, have entered into an aſſociation for improving them, by preventing all fiſhing at improper ſeaſons, which, it is ſaid, has had a very good effect. If all concerned in the fiſheries of the Clyde would concur in adopting ſimilar meaſures, and not only put a ſtop to all illegal fiſhing, but abſtain themſelves, for a year or two, from the moſt ſevere uſe of their rights, ſuch as taking ſalmon in draught nets and cruives, it is probable the river would yield twenty times the quantity of fiſh which it does at preſent.

## CHAPTER II.

### STATE OF PROPERTY.

THE valuation of the yearly rent of this county, in Scots money, eſtabliſhed by the treaty of Union between the two ancient kingdoms, as a rule by which the land tax and other aſſeſſments are proportioned, is as follows:

| | | | | |
|---|---|---|---|---|
| 1 | Carluke pariſh, | L. 6091 | 14 | 3 |
| 2 | Lanark, | 4217 | 9 | 10 |
| 3 | Carſtairs, | 2150 | 0 | 0 |
| 4 | Carnwath, | 4978 | 19 | 4 |
| 5 | Dunſyre, | 1450 | 0 | 0 |
| 6 | Dolphinton, | 850 | 0 | 0 |
| 7 | Walſton, | 1233 | 0 | 0 |
| 8 | Biggar, | 3323 | 6 | 6 |
| 9 | Liberton, | 2501 | 8 | 0 |
| 10 | Lamington, | 2600 | 0 | 0 |
| 11 | Coulter, | 1600 | 0 | 2 |
| 12 | Crawford, | 5813 | 11 | 4 |
| 13 | Crawfordjohn, | 2360 | 6 | 8 |
| 14 | Douglas, | 5100 | 6 | 5 |
| 15 | Roberton and Wiſtown, united, | 2066 | 6 | 8 |
| 16 | Simontoun, | 838 | 0 | 0 |
| 17 | Covington, | 1333 | 0 | 0 |
| 18 | Pettinain, | 1570 | 0 | 8 |
| 19 | Carmichael, | 2246 | 7 | 4 |
| 20 | Leſmahagow, | 9907 | 0 | 0 |
| 21 | Dalſerf, | 3320 | 0 | 0 |
| 22 | Stonehouſe, | 2721 | 1 | 4 |
| 23 | Glasford, | 2653 | 3 | 10 |
| 24 | Avondale, | 7656 | 14 | 2 |
| 25 | Hamilton, | 9389 | 7 | 5 |
| 26 | Blantyre, | 1684 | 11 | 4 |
| 27 | Kilbryde, | 7679 | 1 | 10 |
| | Carry over, | L. 97,244 | 17 | 1 |

| | | | |
|---|---|---|---|
| Brought forward, | L. 97,244 | 17 | 1 |
| 28 Shotts, | 6558 | 0 | 10 |
| 29 Dalziel, | 1232 | 19 | 10 |
| 30 Cambuſnethan, | 5400 | 2 | 0 |
| 31 Bothwel, | 7389 | 16 | 4 |
| 32 Cambuſlang, | 3235 | 17 | 10 |
| 33 Old Monkland, | 6481 | 9 | 10 |
| 34 New Monkland, | 6821 | 18 | 4 |
| 35 Rutherglen, | 1200 | 0 | 0 |
| 36 Part of Cathcart, | 925 | 0 | 0 |
| 37 Carmunnock, | 1650 | 10 | 0 |
| 38 Govan, | 4702 | 18 | 7 |
| 39 Barony of Glaſgow, | 13002 | 9 | 6 |
| 40 Calder, | 6272 | 16 | 8 |
| Total, L. | 162,118 | 16 | 10 |

SECT. I.—*Eſtates and their Management.*

The property of the above is divided in the following manner:

| | | | |
|---|---|---|---|
| *1ſt*, The moſt conſiderable land proprietors, who hold eſtates, the valuation of the leaſt of which is upwards of 2000 l., are 11 in number, and the amount of their valuation is L. | 48,374 | 0 | 0 |
| *2d*, The proprietors, who hold eſtates valued from 2000 l. to 1000 l., are 15 in number, and the amount of their valuation is | 19,433 | 3 | 8 |
| *3d*, There are 39 proprietors, who hold eſtates valued at between 1000 l. and 400 l., and their valuation amounts to | 24,598 | 11 | 0 |
| *4th*, There are 138 proprietors holding lands valued from 400 l. to 100 l., whoſe valuation amounts to | 24,008 | 9 | 6 |
| Carry over, L. | 116,414 | 4 | 2 |

| | | | |
|---|---|---|---|
| Brought forward, | L. 116,414 | 4 | 2 |
| *5th*, Thoſe who hold properties below the valuation of 100 l. are very numerous, being near to 900, and the whole of their valuation is - - | 35,652 | 6 | 0 |
| *6th*, The lands belonging to burghs, and other ſocieties and bodies corporate, or dedicated to the ſupport of hoſpitals, &c., the valuation of which amounts to - - - - - | 10,052 | 6 | 8 |
| Total, | L. 162,118 | 16 | 10 |

The lands comprehended under the three firſt claſſes of the above enumeration, are generally either the property of families of a conſiderable ſtanding in the county, or are parts of the eſtates of ſome of the great landholders of the neighbouring counties, and being for the moſt part under entail, remain in the poſſeſſion of the ſame race of proprietors, while that race continues. This, however, is not univerſally the caſe: ſome are free of entail, and lands to a conſiderable value, included in theſe claſſes, have been lately in the market.

The lands comprehended in the fourth and fifth claſſes are more ſeldom under entail, and do not often continue many ages in the ſame family; particularly in the more populous parts of the county, where the wealth gained by commerce or manufacture is frequently laid out in the purchaſe of land; and the buyer and ſeller exchange employments.

*Management.*—Upwards of three-fourths of the ſurface extent of the county is the property of great landholders. Thoſe who have the greateſt part of their eſtates within this county, have country reſidences in it, which they generally occupy at leaſt for a part of the year. Part of the lands round their habitations is cultivated under their direction; and much of it has been greatly improved, in the

courſe of the laſt 40 years. Many have extended their improvements ſtill wider, eſpecially in ſheltering and adorning their eſtates, by incloſing and planting. One gentleman, Andrew Stirling, Eſq. of Drumpellier, who, by purchaſes moſtly recent, has become a great landholder, has highly diſtinguiſhed himſelf as an improver. Bred in the commercial line, he has carried the enterpriſing ſpirit of that profeſſion into all his tranſactions as a landholder; and though his purchaſes, probably, were chiefly made with a view to coal, in the diſcovery and working of which he has been very ſucceſsful, he has been no leſs attentive to the improvement of the ſurface, and, by a well conducted courſe of induſtry, has given ſuch an addition of fertility to an extenſive tract, that a perſon who had not ſeen it for 20 years, if brought on it now, would ſcarcely believe it was the ſame country. Others might be ſignalized on the ſame account; ſuch as Major Gen. Sir James Stewart Denholm of Coltneſs, who, by uncommon exertions, has made valuable improvements on a conſiderable extent of land, naturally very unpromiſing. The ſame may be ſaid of Walter Campbel of Shawfield, Eſq. But the buſineſs of this work is to give a general deſcription of the ſtate of the county, rather than to celebrate the conduct of individuals; and it is hoped, that what is ſaid of the gentlemen mentioned, will not be ſuppoſed to depreciate the merits of thoſe who are not.

A conſiderable extent of incloſed land on the different eſtates is kept moſtly in graſs, and let out from year to year in paſture, it being broken up only for a few crops of corn, at diſtant periods, and again ſown out with graſs ſeeds. But the greateſt part is rented upon leaſes to huſbandmen; and the right of poſſeſſion is ſecured to them and their heirs by an old ſtatute, although the land ſhould change its proprietor, ſo long as the leaſe laſts.

The proprietors of ſmall eſtates, ſuch as thoſe of the fifth, and many of thoſe of the fourth claſs, frequently cultivate the whole or a conſiderable part of their own lands; and

much of the improvement of the county is owing to their efforts and example; ſo that a perſon paſſing through it has no difficulty of diſtinguiſhing thoſe parts which are divided into ſmall properties, from thoſe which are not.

### SECT. 2.—*Tenures.*

There is no inſtance, known to the writer, of lands being held, in this county, by any other tenure than that which is common to Scotland, by the cuſtom of which the feudal ſyſtem is ſtill followed in the conveyance of landed property. According to this ſyſtem, the ſovereign is underſtood to be the ſole lord of all the ſoil, minerals, and waters, poſſeſſed by his ſubjects. From him alone, therefore, the legal right of enjoying the property of land is ſuppoſed to be derived; and certain annual acknowledgements are due to him in return *. This right muſt be renewed upon every ſucceſſion, whether of an heir or a purchaſer, and a fixed fine paid. The landholder, thus inveſted by royal charter, is poſſeſſed of a certain emanation of the ſame ſovereignty proportioned to the extent of his domains †, and can give charters to others, to hold ſuch parts of them of him, in the ſame manner as he holds of the ſovereign, and upon ſuch conditions as he thinks proper; and theſe again can parcel out what they have thus acquired, in the ſame manner; and ſo on. But it ought here to be underſtood, that when lands are ſold, the purchaſer may either hold of the ſeller, or of the perſon of whom the ſeller held, according to the agreement between the parties.

In all caſes, he who conveys is called the *ſuperior*, and thoſe who receive the conveyance the *vaſſals*. The annual quit-rent paid by the vaſſal to the ſuperior is called *feu*;

* Some lands are held of the heir-apparent of the crown, but the nature of the tenure is the ſame.

† It having been ſuppoſed that the authority which the barons had over their vaſſals, had, in the rebellion 1745, brought numbers to the field againſt government, contrary to their inclination, an act of parliament paſſed in the year 1748, which, without overturning the feudal ſyſtem, broke its force, and reduced this deputed ſovereignty to a ſhadow.

and the fines upon ſucceſſions *caſualties*. Lands held by charters immediately from the ſoverſign, are called *free-holds*; and thoſe conveyed by ſubject ſuperiors, *baſe holdings*. Thoſe only who hold their lands by the firſt kind of tenure, can be electors of a repreſentative of the county in the houſe of commons; and except only in a few inſtances of charters of an old date, to which this right is ſpecially annexed *, the extent of valuation muſt be 400 l., to give the qualification for this privilege. As noblemen who, either ſitting or being repreſented in the upper houſe, are excluded from interfering in the elections of the commons, hold lands, in this county, to the amount of 34,000 l. of valuation, and as thoſe of the fourth, fifth, and ſixth claſſes, with all the baſe holdings which may be in the three firſt claſſes, are alſo out of the queſtion, neither the number of electors, nor the land they repreſent, can be conſiderable.

The unwieldy and artificial manner of ſecuring and transferring landed property, according to the feudal ſyſtem, as above deſcribed; the frequent renewal and repetition of deeds and writings of different names and diſtinctions; and all the various formalities requiſite, have rendered the aid of men learned in the law indiſpenſable. The employment of theſe increaſing as the commerce and wealth of the country increaſed, has occaſioned an increaſe of their numbers: and the increaſe of numbers, again, has whetted their ingenuity to enlarge the employment, in which they have been abundantly ſucceſsful. They are now become a powerful corporation, whoſe head is in the capital, and its members extended over the kingdom. Having, by ſuch means, accompanied with great profeſſional habits of induſtry and acuteneſs, become neceſſary on all occaſions, they come in with the proprietors and cultivators of land, for a goodly ſhare of the produce, without either directing the improvements or aſſiſting the labours of cultivation.

* Called Retours on a forty ſhillings land of old extent.

## CHAPTER III.

### BUILDINGS.

THE buildings of a country, next to the land, are the leaſt periſhable wealth of the community; and while the latter furniſhes ſupport, the former affords ſhelter and accommodation to the inhabitants. It ſeems only in this view that buildings can obtain a part in a work of this nature: for though the magnificence of the buildings ſhows the wealth and grandeur of a people, and the ſymmetry of the architecture the refinement of their taſte, neither of theſe have any connection with their ſkill and diligence in agriculture; nor is it to be expected, that the judgment of a plain agriculturiſt ſhould be ſo much formed upon the models of Greece and Rome, as to give a critical deſcription of them; and it is believed ſuch a digreſſion would not be expected, nor perhaps reliſhed, by the moſt part of readers, if it were attempted. It will be ſufficient, therefore, juſt to make mention of the different kinds of buildings; ſuch as, 1*ſt*, Public buildings; 2*d*, The reſidences of the opulent; 3*d*, The houſes occupied by thoſe who are ſupported by their own labour; making, as we go along, what remarks may occur, which bear any relation to the cultivation of the country.

#### SECT. I.—*Public Buildings.*

Public buildings again may be divided into three claſſes, according to the purpoſes for which they are intended; 1*ſt*, For inſtruction and conſultation; 2*d*, For correction; 3*d*, For the reception of the diſeaſed and indigent.—The moſt conſiderable of the firſt claſs, are the buildings of the Univerſity of Glaſgow, (in which a correſpondent regrets that there is no inſtitution for agricultural inſtruction) and the different churches, &c. in the county. St. Mungo's church, in Glaſgow, is the only edifice of the ancient Gothic architecture, which remains entire and in uſe. The other churches in the county, of an old ſtanding, are generally

very homely piles. The more modern ones are better built; and many of them being furniſhed with ſpires, beſides their principal purpoſe, diverſify the ſcenery, and heighten the beauty of the country.

With reſpect to the ſecond claſs of buildings, the different priſons, as well as all the other priſons of Britain, were certainly intended principally for correction; but it has been much queſtioned how far they have anſwered this ſalutary purpoſe. A highly benevolent and enlightened character, the late celebrated Mr. Howard, ſtood forth, and recommended, as an amendment, to commit offenders to ſolitary confinement, where, in the privation of temptation and amuſement, while they laboured for their ſupport, ſerious thoughts might take place, and operate reformation. This has been tried in the city of Glaſgow, an account of which is given in the following extract from Sir John Sinclair's Statiſtical Account of Scotland, Vol. V., page 514. "This inſtitution was begun in the year 1789, when, in "order to try the effects of ſolitary confinement and la- "bour, ſome buildings belonging to the city, and formerly "uſed as granaries, were fitted up as ſeparate cells, for the "reception of perſons guilty of crimes meriting ſuch pu- "niſhment. Theſe have been gradually increaſed to the "number of 64, where the priſoners are kept ſeparate "from one another, and employed in ſuch labour as they "can perform, under the management of a keeper, and "under the direction of a committee of council, who in- "quire into the keeper's management, &c. The members "of the town council, alſo, in rotation, are appointed to "viſit, not only this, but the priſons and cells near the hoſ- "pital, once every week, and report whatever appears to "them to be proper either to be rectified or altered. The "keeper has a record of the ſentences on which each pri- "ſoner is confined—keeps an exact account of the wages "of their labour, and after defraying the expence of their "maintenance, the ſurplus is paid to them, when the pe- "riod of their confinement expires; and ſome have receiv

" ed from 5 l. to 7 l. Experience in this, and other great " towns where this inſtitution has been eſtabliſhed, has " demonſtrated, that, of all the ſpecies of puniſhment for " offenders of a certain deſcription, ſolitary confinement " and labour is not only the moſt humane, but the beſt " calculated to anſwer one great end of puniſhment, the " amendment of the offender." The magiſtrates and council have ſince been enabled, by the aſſiſtance of ſome benevolent donations, to erect buildings more completely adapted to the ends propoſed.

Inſtitutions of this kind, on a ſmaller ſcale, eſtabliſhed in the different pariſhes, particularly of thoſe parts of the county, where the number of inhabitants is much increaſed by the mixture of people employed in the great manufactories, would be much for the advantage of that part of the ſociety who are engaged in the cultivation of the ſoil; and at the ſame time, if the experience above mentioned may be relied on, be a great benefit to offending individuals, as well as to the manufactures in which they were employed. There is no kind of property ſo much expoſed to pillage as that of the huſbandman; and by an unfortunate prejudice, which too generally prevails, there is none, againſt the pillaging of which fewer ſcruples are entertained. The prevalent manufactures give employment to numbers of young people, whoſe parents, perhaps, were neither qualified nor diſpoſed to ſtore their minds with moral inſtruction. Theſe are, by the profit of their labour, rendered independent, while they are incapable of the innocent enjoyment of freedom. By ſuch, the practice of the ſocial duties is too frequently not only neglected, but made the ſubject of ſport and ridicule—the diſſolution of manners thus extended—and idleneſs and licentiouſneſs kept in countenance and encouraged. The violation of property, therefore, when it can be committed with any chance of impunity, is little regarded, and the produce of a neighbour's field ſeems almoſt to be thought lawful prize: ſo that if the corruption of manners ſpread with as great rapidity for a dozen of years

to come, as it has done in the dozen laſt paſt, it is difficult to conceive how the huſbandman can be protected in his rights, or be allowed to purſue his employment with comfort. As thoſe giddy people, by whom the depredations on the fields are moſt commonly committed, by the idleneſs ſuch practices induce, injure their own intereſt as much as that of others, it is the duty of all ranks to endeavour to put a ſtop to theſe flagitious practices. By the judicious uſe of a few cells, excluded from all communication, and from the view of all amuſing objects, and provided with the implements of different artiſans, erected in the moſt populous pariſhes, theſe depredations might perhaps be checked; and a number of thoughtleſs young people, not yet hardened in vice, whom a ferment of blood, unreſtrained by proper habits, hurries into crimes, be brought to a ſenſe of propriety, and become uſeful members of ſociety.

The public is ſo little accuſtomed to ſympathiſe with many of the hardſhips peculiar to huſbandmen, that probably the offences above hinted will be thought too trivial for theſe ſerious animadverſions. But it will not ſurely be denied, that, as all are intereſted in the produce of the earth, which is committed to the charge of huſbandmen, whatſoever tends to waſte and deſtroy it, or interrupts and diſcourages the means uſed to augment its quantity, is of a nature the moſt generally injurious: and, therefore, the cultivators of land have at leaſt as ſtrong a claim to public protection as any other claſs. But ſuppoſing the cauſe of huſbandmen out of the queſtion, and any offence committed againſt them ever ſo trifling, the public ſhould be reminded, that bad habit is the cauſe of great offence; and thoſe who begin with plundering the fields will ſcarcely ſtop there. An eminent French author obſerves, "Les mœurs "ſont nonſeulement le tableau vivant de l'etat de la ſocieté; "mais en ſont encore le reſſort principal." And again, "Ou "les mœurs regnent, les loix les plus ſimple ſufficent." Since manners are of ſuch importance, it is ſurely proper to begin in time to correct them, where they are wrong.

That the advancement of manufacture, while it promotes the proſperity, deſtroys the morals of a people, is but a vague indiſcriminating obſervation, calculated to inſpire a groundleſs deſpair and indifference for the concerns of the public. That ſuperfluity of wealth, which has been conſidered as one great origin of diſſolute manners, cannot deſcend to the great maſs of the people: nor can the exerciſe of any branch of induſtry, of itſelf, corrupt the morals of the perſon who earns his livelihood by it. The viſible declenſion of morals cannot, therefore, be ſolely attributed to the advancement of manufacture: nor does it appear to be a very romantic hope, that, if the attention to the ſubject were equal to the intereſt which people of all ranks have in it, ſuch a degree of decency and propriety of manners might long be preſerved, among the body of the people, as the comfortable exiſtence of ſociety abſolutely requires: and ſurely no means ſuited to accompliſh ſo valuable an end ought to be neglected.

Of the third claſs of public buildings there are ſeveral in this county, both for

"The young who labour and the old who reſt;"

an enumeration of which, it is believed, would be needleſs. What is called the Poor's Houſe in Glaſgow, and the Infirmary lately built there by public contribution, for the reception and cure of the ſick and wounded, are the moſt prominent. Were it convenient, here, to give an account of the charitable contributions in favour of theſe inſtitutions —of the attention paid, and the wiſe meaſures purſued, by ſocieties and individuals, in conducting them—of the numbers of helpleſs and diſeaſed people entertained, and the benefits they have received, it would do honour to the humanity and liberality of the inhabitants, particularly thoſe of the preſent age, by whom ſo many additions and improvements have been made.

### SECT. 2.—*The Reſidences of the Opulent.*

Beſides the large buildings in towns for the accommodation of the opulent, excepting in the moſt elevated parts of the county, where the ſituation is too bleak and forbidding, the face of the country is finely interſperſed with the ſeats of the principal land-holders, or the villas of the wealthy merchants, manufacturers, &c. The attention which has been generally paid to ſhelter and adorn the grounds around theſe, has contributed greatly to the beauty, and alſo to the fertility, of the country; gardening, purely ornamental, having hitherto abſtracted but little land from the main uſe of producing food either by corn or paſturage.

### SECT. 3.—*The Houſes occupied by thoſe who are ſupported by their own Labour.*

Among theſe may be ranked the houſes of the proprietors of the fifth claſs, in the enumeration contained in the laſt chapter, and a part of thoſe of the fourth: for though the occupants of theſe derive a part of their income from their land rent, they depend ſtill more on their own induſtry in the cultivation. The moſt part of theſe do not differ greatly from the better ſort of farm houſes occupied by tenants. The farm houſes and offices have been much improved of late years: in general, however, they are not ſo comfortable, nor ſo well adapted to all the purpoſes of agricultural improvement, as they ought to be. It is not neceſſary, indeed, here, to have the offices ſo extenſive as in places where the crop is ſtored within doors; it being the general opinion that both corn and hay are beſt preſerved in the open air; and for that reaſon, no hay, and only that part of the corn which is intended to be firſt threſhed out, is ſtored in the barn; but there is a great want of ſheds and convenient ſtraw yards for young cattle, &c. The high price of ſlates, and the diſtant land carriage to many parts of the county, has much diſcouraged the uſe of them,

which is alſo a diſadvantage to huſbandry, as thatched roofs give great harbour to vermin, and the covering of ſo many of them, at the end of every ſhort period, with ſtraw, conſumes a great deal of what would be better beſtowed in littering live ſtock, and making manure, an article which, important as it is, cannot be otherwiſe procured in many places diſtant from towns. There are, it is true, many tiles manufactured and uſed in the county; but when that manufacture was firſt begun, the tiles were of a bad quality, and thoſe who uſed them had cauſe to repent it, which deterred others from following the example; ſo that, though great improvement has been ſince made in the manufacture of tiles, they are not yet very generally uſed for covering farm houſes. As convenient accommodation is better underſtood, and more eagerly deſired than heretofore, and as ſome of the moſt conſiderable landholders are diſpoſed to make ſuch additions and amendments to the farm houſes as ſhall be required, on reaſonable terms, it may be expected that, as leaſes fall, much improvement will be made in this article.

It is in vain to ſay any thing of the ancient cottages of the county, the former nurſeries of field labourers; for they may be ſaid to be now no more; as the few ſcattered ones which ſtill remain can ſcarcely be called an exception. It having, for a long time, been the cuſtom of this county for farmers to keep only unmarried ſervants, who are lodged and fed in the houſe, for the execution of agricultural labour, the cottages on the different farms have dropt gradually into ruins, and been removed; and the ſmall tenements being moſtly ſwallowed up in the larger farms, the cottagers and the farm ſervants, when they marry and ſettle, withdraw from their rural habitations to towns and larger villages, to which the increaſe of employment alſo invites them; and their progeny, who, formerly were from their infancy habituated to the labours of the field, are moſtly occupied in ſome branch of manufacture: ſo that the means by which the neceſſary ſupply of labourers

in huſbandry uſed to be obtained is in ſome meaſure cut off.

This change has been pathetically bewailed by perſons of feeling hearts and warm imaginations, who, being charmed with the ſimplicity of rural life, have painted the ſequeſtered cottages as the calm retreats of innocence and virtue, while the diſciples of a more rigid ſchool have juſtified and extolled the meaſure of driving the ſuperfluous inhabitants from the country, to follow induſtry in towns. It is probable that neither the former had very accurately conſidered the ſubject of their lamentations, nor the latter made proper calculations how many inhabitants any diſtrict of the country ought to contain, before it became neceſſary to drive any of them away. The diminution of cottages in this county does not, indeed, appear to have proceeded from any premeditated plan of economy, but from fortuitous cauſes. But certain it is, whether the ſcarcity of field labourers be aſcribed chiefly to the proſpect of ſuperior eaſe and comfort to which a growing manufacture invites, or partly to the little attention paid to preſerve thoſe in their former habits and ſituation, who might have been willing to remain, it has been much felt for ſome years paſt, and ſtill ſeems to be increaſing. No doubt, the war, which has carried the flower of our peaſantry to the army, has alſo contributed. Many can never return; thoſe who do will hardly bring all their former induſtry and activity along with them. But if the capital employed in agriculture were equal to what the complete cultivation of the county would require, many more hands would be wanted, while, in the mean time, the former means by which the uſual recruit was obtained, is cut off by the demolition of cottages; and it ſtill remains to be ſeen whether or not Dr. Goldſmith's famous diſtich,

> "But a bold peaſantry, their country's pride,
> "When once deſtroyed, can never be ſupplied,"

be as juſt as it is poetical.

The county, however, is ſupplied with a new ſet of cottages. Several landholders, partly perhaps to prevent the depopulation of the country, and partly for their own emolument, have let out, either in feu or long leaſes, ſpots of ground, for houſes and little gardens, generally upon the ſides of the public roads. Upon theſe many little handſome cabins have been erected, which, accompanied with neatly dreſſed gardens, ſupplied with pot-herbs, and frequently ornamented with a few flowers, have a very pleaſant effect. Theſe are moſtly cluſtered into villages, ſome of which are become pretty populous. But though many of them are occupied by the inhabitants of the old cottages, or by farm ſervants when they marry, moſt of the children betake themſelves to ſome kind of manufacture; and, in a ſofter life, loſe both the reliſh for, and the power of performing, the more rugged labours of the field.

Farm houſes are built at firſt by the landlord, and the tenant is bound to keep them in repair during the time of his leaſe, and to leave them in good condition at the expiry of it. Every ſucceſſor is bound in the ſame manner. Of late, ſome landlords contract to make the farm houſes of a certain money value at the commencement of the leaſe, and the tenant to leave them of the ſame value at the end of it, or to pay the deficiency, as the ſame ſhall be eſtimated by men of judgment: on the other hand, if the tenant, for his own conveniency, ſhall have made the houſes of greater value than they were at the firſt, the landlord pays to him the increaſed value. The proprietors of cottages bear the expence of all the neceſſary repairs (glaſs excepted), unleſs there be a particular agreement to the contrary.

## CHAPTER IV.

### MODE OF OCCUPATION.

THE face of this county being greatly diverſified, the mode of occupation is different in different parts. The mountainous diſtrict, at the head of it, is occupied moſtly with flocks of ſheep: upon the ridges on the E. and W. ſides, where the ground is marſhy, and leſs proper for ſheep, and the expoſure too bleak to encourage the cultivation of corn, cattle are moſtly paſtured, and thoſe generally milch cows and their young, many of which are reared; a ſmall quantity of corn only being cultivated, principally for the ſake of winter provender: the leſs rugged and leſs expoſed parts are more occupied in the culture of corn, &c.

#### SECT. 1.—*Size of Farms.—Character of Farmers.*

Every pariſh was formerly divided into ploughgates, each of which conſiſted of from 70 to 120 acres of arable land. One of theſe, for the moſt part, made one farm. In ſome caſes, a ploughgate was divided between two farmers; and there were ſometimes ſmall tenements annexed to ploughgates, not more than a fourth, or, as it was called, a horſegang, having a houſe, and occupied by a ſubtenant. The greateſt part of the farms are ſtill moderate, renting from 30 l. to 150 l. yearly: but of late ſome farmers have obtained larger poſſeſſion, ſome renting from 200 l. to 600 l. In the ſheep paſtures, the farms are very extenſive.

The huſbandmen of this county are hardy, active, and laborious, well qualified to ſtruggle with the difficulties of ſoil and climate above deſcribed, and equally frugal and economical. Fortunately, to uſe the words of a late celebrated ſatiriſt, they are "not overburdened with unwieldy knowledge." Inſtead of pretending to tear away the veil, under which nature has concealed many of her important operations, they are attentive to acquire experience, by obſerving what paſſes under their notice. Having now,

in a great meaſure, ſhaken off thoſe fetters, in which prejudice holds huſbandmen, perhaps, faſter and longer than any other ſet of men, they communicate with one another, and mutually learn ſuch practices as tend to improvement. Such in general is their profeſſional character.

Their moral character is, probably, nearly the ſame with that of the inhabitants of other diſtricts in ſimilar circumſtances. Men of acute feelings who, in their commerce with the buſy world, have been hurt with the inſincerity and knavery of mankind, contraſting the open unſtudied addreſs of countrymen with the artificial manners practiſed in the crowded walks of life, have repreſented the country as the ſole abode of innocence, and countrymen as the moſt virtuous of the human race. This fair portrait of rural manners, however, has not been ſuffered to paſs unbedaubed. Much ingenuity has been employed, and much pretended ſagacity diſplayed, in drawing aſide the countryman's garb of ſimplicity, and ſhowing the craft, hypocriſy, ſordid avarice, &c., ſuppoſed to be concealed under it. The failings of humanity, no doubt, will accompany man, in whatever ſituation he is placed: but when it is conſidered in how little eſtimation huſbandmen are held, it is leſs a wonder that vices are to be found among them, than that there are ſo few. The ſpruce citizens laugh at their ruſtic, homely appearance, fly in a rage when the price of country commodities are raiſed in proportion to the demand, and enter into combinations to beat them down. If farmers become rich by their induſtry and good fortune, they are accuſed of extortion, of ſtoring up their corn, or ſending it to foreign markets, to ſtarve the poor; if they are unfortunate, they are deſpiſed. The haughty lordling, who ſhould be their patron and protector, regards them only as an inferior race, formed to toil for his enjoyment; and the family who have run a leaſe of induſtry and good management, are diſmiſſed at the end of it, if a ſtranger offers a little more rent. Againſt ſuch an hoſt of depreſſion, the inſulated huſbandman has no ſhelter, but ſilent diſſimula-

tion, and it is not ſurpriſing that he ſhould ſometimes have recourſe to it.

This ſtricture is not meant to extend to all. The conduct of the rational and the diſcerning of every rank will be very different. But ſtill ſuch prejudices are too common; and the cultivators of the country do not ſeem to poſſeſs that reſpectability which the importance of their ſituation deſerves. It is an obſervation not leſs true than trite, that ſelf reſpect is one of the beſt guards againſt the commiſſion of crimes; and that people will be more diſpoſed to reſpect themſelves, when they are reſpected by the world. It is a generous employment that of a huſbandman: Let it be regarded as ſuch, and the virtues congenial to it will be more conſpicuous among its profeſſors, and render them ſtill more eminently uſeful to ſociety.

The political character of huſbandmen, one would have thought, ſhould have made them the darlings of ſtateſmen and politicians. Strongly attached to their native ſoil, and fully occupied in the diverſified employment they find upon it, they neither have the diſpoſition nor the leiſure to enter into ſpeculative diſquiſitions concerning government: and while the people engaged in manufacture are perpetually lifting up the heel againſt that adminiſtration which has bolſtered up the ſources of their ſupport, neglected huſbandmen remain peaceful and paſſive, except in extraordinary emergencies, when they ſtand forth to offer government ſuch feeble aſſiſtance as they can beſtow. The truth of this poſition will be beſt illuſtrated by ſtudying the hiſtory of mobs, by which it will appear, that a thouſand of theſe have riſen in towns and populous manufacturing places, for one in the country; and in the few which have happened in the laſt, ſcarcely any perſon has been concerned, who deſerved the name of cultivator, or was poſſeſſed of the habits naturally attached to that employment. *Pius quæſtus, ſtabiliſſimuſque, minimeque invidioſus; minimeque male cogitantes ſunt, qui in eo ſtudio occupati ſunt.*

The religious character of the huſbandmen of this coun-

ty, and, to ſpeak more largely, of the generality of thoſe in the kingdom, is a zealous adherence to the form of church government, and mode of religious worſhip, eſtabliſhed by their anceſtors at the reformation. Many, indeed, have withdrawn from the church, as now eſtabliſhed; but it is becauſe they apprehended that church had ſwerved from its original purity. The ſupport of all the teachers, &c. of the different ſects, has greatly increaſed the expence of public inſtruction, a conſiderable part of which is drawn from the cultivators of land: and it has been much doubted if the cauſe of real religion has been advanced in the ſame proportion. It is not convenient here to inveſtigate the cauſes which has produced theſe religious ſchiſms; but it may be juſtly regretted, that, amidſt the various controverſies upon abſtruſe and ſpeculative points, the ſublime morality, inculcated by the chriſtian religion, ſo conſonant to the ſtate in which huſbandmen are placed, and ſo well adapted to afford them conſolation in all difficulties, ſhould be ſo ſlightly regarded.

## SECT. 2.—*Rent.*

The rent of land, in this county, is moſtly paid in money, the old perſonal ſervices, ſo oppreſſive to the farmers, and ſo unprofitable to landlords, being generally aboliſhed. A few fowls are ſtill exacted from the farmers of ſome eſtates, beſides money rent; and the reſtriction to carry the corn to certain mills to be ground is ſtill continued. But by this oats only is meant, which was and is ſtill conſidered as the principal bread corn. This is a real grievance, not ſo much on account of the heavy exaction levied for the grinding, which is generally double, and ſometimes triple, of what would be required at a mill to which the farmer was not bound, as the farmer, knowing the extent of this exaction, may be ſuppoſed to have laid his account with it, but being bound to carry the corn to be ground by a perſon, perhaps, neither whoſe ſkill nor honeſty can be depended on, and from whom little civility is to be expected. Farmers

bound to a mill are alſo bound to carry mill-ſtones from the quarry, whatever be the diſtance, and to aſſiſt at repairing the mill, mill-dam, and mill-lead, when required. Theſe are abſurd ſervitudes, and ought certainly to be aboliſhed. Some farmers are bound to pay the land-tax and other public burdens; but theſe payments are oftener made by the proprietor.

As ſome parts of the county differ widely from others, with reſpect to fertility, ſo alſo the rent of land is not leſs different. For many years paſt there have been inſtances of good land, which had been gaining fertility by lying long in paſture, letting for two or three crops of oats, at the rate of 7 l. or 8 l. per acre yearly; and within theſe three years ſome has been let as high as 11 l. Some rich land near towns, is let, for the courſe of a leaſe, at the rate of 5 l. and upwards, per acre; and there is arable land let not much above 3s. per acre. Paſture ground is rented from 3 l. to 8s. or 10s. per acre.

Upon the whole, the rent of land is certainly too high, ſince few inſtances are to be found of farmers, with the utmoſt induſtry and attention, improving their ſtock at the ſame rate with others in leſs laborious employments. The great riſe on the price of proviſions of all kinds, in the years 1795 and 1796, no doubt threw a great deal of money into their hands; but it was impoſſible this dearth could continue. While it did, the poorer ſort were reduced to great ſtraits; and if it had not been for the flouriſhing ſtate of manufacture, many more would have been in the ſame condition. It is alarming to think in what ſtate the country muſt have been, if manufactures had been at as low an ebb as they were in the year 1793. Many muſt have been reduced to ſtarving, and the price of proviſions fallen, for want of conſumers capable to purchaſe, if ſomething worſe had not happened. It is neither to be wiſhed nor expected, therefore, that the rent of land ſhould be kept up, or raiſed by ſuch means.

It is impoſſible to give an exact ſtate of the whole land-

rent of the county, many of the ſtatiſtical accounts of the pariſhes being ſilent on that head. In the report made in 1794, it was attempted to give a general idea of it, and though it was in part conjectural, it was probably not far from the truth. The ſame ſhall now be given here, allowing the reader to make what alteration he thinks proper for the difference of the times.

In the upper ward, the ſheep paſtures of Crawford will maintain a ſheep for every two acres, and the rent paid per head is about 3s. In ſome of the more wet and barren moors, it will perhaps require three acres to maintain each ſheep, and a farmer cannot afford to pay more than 1s. 6d. per head. The arable land, fertile as much of it is, with all the inconveniencies of climate, diſtance from market, and the many ſpots of poor land intermixed, which cannot be profitably improved, on account of the ſcarcity of manure, and other diſcouragements, does not perhaps yield of rent, on an average, above 8s. per acre. The mooriſh land of the middle ward, when the moſſes above deſcribed are included, is ſtill leſs valuable than that of the upper ward. The arable land, though from the circumſtances of its ſituation, and the great improvements which have lately been made, ſome of it lets, at times, nearly as high as moſt land in Britain; yet there is a great proportion ſo ſterile in its nature, and ſo unhappy in its expoſure, that the average rent of the whole probably does not exceed 14s. per acre. The under ward, though not originally more fertile, on account of its ſituation in the neighbourhood of Glaſgow is now more valuable. The average rent may be computed at 25s. per acre. The following is a kind of ſcheme of the county:

| UPPER WARD, | Acres. | Acres. |
|---|---|---|
| Moor paſture, - - | 185,000 | |
| Woods, - - - | 3,140 | |
| Channels of rivers, brooks, roads, &c. - - | 2,060 | |
| Orchards, - - - | 70 | |
| Arable and meadow, - | 76,490 | |
| | | 266,760 |
| MIDDLE WARD, | | |
| Moors and coarſe paſture, | 66,000 | |
| Woods, - - - | 4,150 | |
| Channels of rivers, ſites of towns and villages, roads, &c. | 1,300 | |
| Orchards, - - - | 130 | |
| Arable, - - - | 70,750 | |
| | | 142,330 |
| LOWER WARD, | | |
| Woods and waſte ground, | 1,000 | |
| Sites of towns, roads, &c. | 1,500 | |
| Arable, - - - | 33,850 | |
| | | 36,350 |
| Total acres, | | 445,440 |

The yearly rent may ſtand thus:

| UPPER WARD, | | L. | s. | d. |
|---|---|---|---|---|
| Paſture, 185,000 acres, at 1s. | L. 9,250 | | | |
| Arable, 76,490 acres, at 8s. | 30,596 | | | |
| | | 39,846 | 0 | 0 |
| MIDDLE WARD, | | | | |
| Paſture, 66,000 acres, at 6d. | 1,650 | | | |
| Arable, 70,750 acres, at 14s. | 49,525 | | | |
| | | 51,175 | 0 | 0 |
| LOWER WARD, | | | | |
| Arable, 33,850 acres, at 25s. | | 42,312 | 10 | 0 |
| Total rental, | | L. 133,333 | 10 | 0 |

## Sect. 3.—*Tithes.*

There being nothing, relating to tithes, peculiar to this county, this article might be immediately diſmiſſed. But as theſe reports may fall under the peruſal of readers unacquainted with the cuſtoms of Scotland, it ſeems neceſſary that theſe cuſtoms ſhould be explained, ſince this has not been done in the Mid-Lothian Report (the only one which the writer of this has ſeen), in which it was moſt likely to be expected. It was for this reaſon, that, in a former chapter, an attempt was made to explain the nature of Scots tenures; and, for the ſame reaſon, it may be proper to do the ſame with any ſimilar article which may occur.

In Scotland, as well as the other countries of Europe, the Jewiſh law, Numb. xviii. 21. was adopted in making proviſion for the miniſters of religion: but the tenth part of the produce of a barren land was little for ſupporting the numbers whom ſuperſtition, in the days of ignorance and idleneſs, induced to embrace holy orders. The clergy, however, in the influence which their ſacred office gave them over the minds of the people, poſſeſſed, in ſuperſtitious times, abundant means of increaſing their funds, of which they knew well how to avail themſelves. While they directed others in the way to heaven, they accepted the reward of their pious labours in the goods of this world; and of theſe they had at laſt obtained a large ſhare. Dr. Robertſon, in his Hiſtory of Scotland, ſays, "The Scotti" ſh clergy paid one half of every tax impoſed upon land; "and as there is no reaſon to think that, in that age, they "would be loaded with an unequal ſhare of the burden, "we may conclude, that, by the time of the reformation, "little leſs than one half of the property of the nation had "fallen into the hands of a ſociety, which is always ac"quiring, and can never loſe." When the dawn of knowledge had ſomewhat diſpelled the miſt of ſuperſtition, and the bold truths, every where advanced, had battered down the bulwark of ſanctity, with which the clergy and their

poſſeſſions were ſurrounded, their wealth became a tempting prize to the avidity of the laity, and they were hunted down for the ſake of the ſpoils they poſſeſſed. The nobleſſe and retainers of the court, not only got hold of the greater part of their monaſteries, caſtles, manors, and extenſive landed property, but obtained grants from the crown of the tithes which had been originally deſtined for the ſupport of religious inſtitutions, with the reſervation only of ſo much as ſhould be neceſſary for the maintenance of a ſpiritual paſtor in every pariſh; and a very little was, in thoſe days, thought ſufficient for this purpoſe. The other land proprietors, many of whom had been equally active in pulling down popery, complained loudly of this unequal diſtribution of the ſpoil. Charles I., who then ſat on the throne, unable to govern, in thoſe turbulent times, was willing to temporize; and having accepted the office of arbiter between the contending parties, decreed, that all thoſe who had obtained grants of the tithes of any diſtrict, who were generally called titulars of teinds, ſhould be obliged to ſell, to the proprietors of the land, a right to as much of the tithes (commonly called teinds in Scotland) as was not exhauſted in the maintenance of the parochial paſtor, at the rate of nine years produce: and the proprietors, who wiſhed to purchaſe, were authoriſed to inſtitute a ſuit before a court, which had been erected for ſuch purpoſes in the preceding reign, to obtain a judicial valuation of theſe teinds, and operate a ſale *. Building and orchards are not comprehended in theſe valuations; and the proprietor is allowed a deduction for the expence he has recently laid out in improvements, ſuch as incloſing, draining, &c.: ſo that it is only from negligence of proprietors, in not negotiating the purchaſes of teinds in time, that any tax has fallen on the induſtry employed in improving the land.

The tithes being thus wreſted from the clergy, cultivators are left at full liberty to increaſe the fertility of the

* Inſtead of the tithes formerly levied in kind, a fifth part of the land-rent was declared to be the teind.

And the ſupport for the teachers of the different ſectaries may perhaps amount to a fourth or fifth of the above.

### SECT. 4.—*Poors Rates.*

Poors rates are impoſed by an act of the Scots Privy Council, 11th Auguſt, 1692, which directs, that the heritors of a pariſh ſhall meet with the miniſter and members of the kirk ſeſſion, who are jointly to make up a liſt of the indigent perſons in the pariſh, and then impoſe an aſſeſſment for their maintenance, one half on heritors, in proportion to the valuation of their property, the other half on tenants and houſeholders, according to their ability. Thus the people who pay the poors rates are both made the judges of the indigence of thoſe who claim charity, and the impoſers of the aſſeſſment for their relief; and this, no doubt, is the beſt guard, which could be well deviſed, againſt an exorbitant aſſeſſment or a prodigal diſtribution.

In the populous manufacturing pariſhes, where the proportion of needy perſons is always greateſt, it has been neceſſary to have recourſe to this mode of ſupporting the poor. In the more thinly inhabited parts, the poor have hitherto been ſupported by the intereſt of money which has been mortified by pious perſons, by the offerings at the church door of the people aſſembling to divine ſervice on Sunday, by hiring out palls for funerals, &c., without having recourſe to aſſeſſments.

### SECT. 5.—*Leaſes.*

On ſheep farms the leaſes are commonly ſhort, as no proceſs of improvement is carried on; on arable farms the moſt common length of leaſe is 19 years. In ſome caſes, when the farmer undertakes extraordinary improvements, ſuch as expenſive draining, making and training up of fences, &c., the length of the leaſe is 31 years; and there are a few inſtances of ſtill longer leaſes. The term at which a new tenant enters upon the poſſeſſion of the land is Martinmas, but the houſes and paſturage are retained by the former poſſeſſor till Whitſunday. Of late, the old te-

ment is bound to relinquiſh to the new one, half the graſs grounds, and lodging for labouring ſervants and horſes, at Candlemas. In ſome eſtates, the farmers are bound to follow a certain ſyſtem of huſbandry and rotation of crops; in ſome they are bound only to have no more than a certain proportion, ſuch as a half, a third, or a fourth, of the farm in tillage crops annually; in others they are left more to their own diſcretion; but, in all, they are laid under certain rules, meant to prevent them from exhauſting the farm towards the expiry of the leaſe.

### SECT. 6.—*Expence and Profit.*

Not being poſſeſſed of the private books of expenditure kept by huſbandmen, it is impoſſible to give a real account of agricultural expence, in any ſituation; but, though this could be done in ſome caſes, the nature and extent is ſo much varied by variations of circumſtances, it would give no fair general idea. It would be eaſy, indeed, to make out, with great ſeeming accuracy, a ſtatement of the probable expence, in the conduct of a farm; but political arithmetic, at the beſt, is not much to be depended on; and, where the data are doubtful, muſt always be very fallacious. The expences attending agriculture are ſo much varied by contingencies, which the greateſt ſkill and induſtry cannot command, that they will not yield to general computation. The unfortunate death of live ſtock has brought many a thriving huſbandman to ruin: even the pricking of a horſe's foot ſometimes diſappoints his projects, and greatly inflames his expence. While a propitious ſeaſon forwards his labour, and diminiſhes his outlay, an unexpected turn of bad weather overturns what he has been doing; his labour is loſt, and he muſt go over the ſame ground again, perhaps with leſs proſpect of advantage. Upon the whole, the expence of cultivation, from cauſes, ſome of which have been already explained, and others will be traced out in the ſequel, has of late been enormouſly increaſed; and when it is conſidered in all its branches, it ſeems ſurpriſing, notwithſtanding the advantage of high prices which huſbandmen have for

ſome years enjoyed, that the improvement of the country ſhould go on as it does.

As the expence of cultivation cannot well be calculated, ſo neither can the profit. We can neither calculate how much corn the froſt will blight, the wind will ſhake, or the rain will rot. We may ſafely aſſert, however, as has been already hinted, that the profit is not, in general, adequate to the ſtock and induſtry employed, or the toil and hardſhip undergone, in queſt of it. Such comforts as farmers enjoy, and ſuch ſavings as they have made, ſeem to ariſe chiefly from an unremitting parſimony, from a minute attention to the detail of their buſineſs, and a remarkable knack of making the moſt of every thing in which their intereſt is concerned; habits, which the high rents and accompanying difficulties have, no doubt, taught and confirmed. Fifty years ago, the farmers of this county lived, as a celebrated poet of our own country expreſſes it,

> " Like the gay birds that ſung them to repoſe,
> " Content, and careleſs of to-morrow's fare."

Their rents were low, and ſo was their ambition; and they jogged on in humble eaſe. But when the riſing proſperity of the nation began to hold out ſuperior proſpects of advantage, they were, on a ſudden, ſeized with a rage, which could ſcarcely have been expected to be found among them. They eagerly outbade one another for every farm, as leaſes fell, and raiſed, at the ſame time, the rents and the avidity of landholders to a great pitch. Such of the new leſſees as were unequal to the taſk ſoon ſank under it; but many have ſtruggled through, and a body of men is now formed, very well adapted to their laborious employment. Such has been the advantage of the rapid riſe of rents; but this has been much overbalanced by the effect it has had, firſt in diminiſhing the capital employed in agriculture, and next in retarding its natural and proper increaſe. Nevertheleſs, there is reaſon to hope that the preſent race of huſbandmen, with a very moderate degree of countenance and encouragement, will gradually arrive at a ſituation fitted to bring the country to the greateſt poſſible improvement.

## CHAPTER V.

### INCLOSING AND DRAINING, ARABLE AND GRASS GROUNDS, IMPLEMENTS, &c.

IT is the univerſal opinion here, that the eaſieſt and ſureſt way of increaſing the fertility of land, is to let it remain for a conſiderable time in paſture, ſo ſoon as it has been put in condition to bear abundance of graſs; and that the richer it has been made by manure, when it was laid in graſs, its fertility will increaſe the faſter. At the ſame time, it is found, that land is rendered more productive, by taking it, at intervals, from paſture to tillage, by which the vegetable ſubſtances, accumulated on the ſurface, are incorporated with, and enrich the ſoil, tending alſo to open and ſeparate its parts, when too denſe and tenacious, and to give it additional mucilage to retain the moiſture, when too open and dry. Hence it is that alternations of tillage and graſs are now the general practice throughout the county, little land being kept long in a courſe of tillage, without being laid in graſs, and none that is thought fit for tillage left in perpetual graſs. The little ſwampy plains, among the eminences on both ſides of the county, are the only inſtances of perpetual meadow.

For this reaſon, the articles in the title of this chapter, which, according to the plan given by the Board of Agriculture, ſhould be the ſubject of four chapters, is comprehended in one. Incloſing is the baſis of the preſent economy through the moſt of the county; draining and ſupporting of fences are parts of the huſbandman's employment; alternate tillage and graſs are the chief objects of his attention; and the implements of huſbandry are the inſtruments with which his work is performed. In treating theſe ſubjects, moſt of the articles comprehended in Chapter XII. of the arrangement propoſed by the Board, will be brought in, and make that head leſs neceſſary in the preſent work.

According to this plan, the preſent chapter will be divided into the following general ſections, viz.

1*ſt*, Incloſing and draining.

2*d*, Tillage, or cultivation, with the implements of huſbandry uſed.

3*d*, Manures, or ſubſtances applied to fertilize the ſoil.

4*th*, Plants cultivated, and rotation of crops.

5*th*, Graſs grounds of all kinds, with the purpoſes to which they are applied.

Each of theſe will be branched out into as many articles as may be requiſite for the illuſtration.

## SECT. I.—*Incloſing and Draining.*

ART. 1. *Incloſing.*—Incloſing is recommended and enforced by ſeveral old Scottiſh ſtatutes, which, as they do not appear to have taken great effect, it will be needleſs to quote. It is appointed by ſtatute in 1661, cap. 41., that adjacent proprietors ſhall be at equal expence, in making fences, with the proprietor incloſing his property along the march between them; and by ſtatute the ſame year, cap. 17., and 1685, cap. 39., judges and magiſtrates are authoriſed to ſtraight marches between conterminous properties, to make incloſing leſs inconvenient and expenſive. Theſe laws have been frequently reſorted to, and greatly forwarded incloſing.

The advantages ariſing from incloſing ſeem not to have eſcaped the obſervation of the inhabitants of this county at an early period. The remains of mounds, probably made to divide the land kept in culture from that on which the cattle paſtured, may ſtill be traced in different parts. Even where they no longer exiſt, the memory of them is ſtill preſerved, through all the country, in the names of many places compounded of the word *dike*. How theſe dikes or fences were conſtructed, how far they anſwered the purpoſe, or why they were abandoned, is no longer known. It is certain the ſpontaneous growth of ſhrubs, which would tend to make them more defenſible, is now ceaſed in places where it once prevailed. A few ſtone fences, of an

old date, here and there ſtill remain. On the low grounds where ſhrubs thrive, there are a good many old incloſures, fenced with hedges compoſed of various kinds; and ſome of a conſiderable ſtanding, fenced with the white thorn alone.

The ſpirit for incloſing, which ſeems for a long time to have been in a great meaſure ſuſpended, revived about 50 years ago, and has increaſed, and proceeded with great perſeverance ever ſince. There is ſcarcely any place where the land has been deemed improvable, and capable of bearing hedges, but ſome attempts towards incloſing have been made. The moſt common mode of incloſing is with ditches, pretty generally known by the name of clap ditches, having a row of white thorn plants laid in the face of the mound formed of the earth taken out of the ditch. Though one has continued to follow another in this practice, it has proved, on the whole, very unſucceſsful. In fertile ſoils, the roots of weeds protected and foſtered under the mound, perpetually put forth their ſhoots, and injure the young thorns. In clay ſoils, the argillaceous ſubſtance at the bottom, which is the bane of many kinds of plants, and of the white thorn as much as any, ſurrounding the roots of the young hedge, on all ſides, as ſoon as they reach it, checks the progreſs of the plants; at the ſame time, the mound of denſe earth excludes the influence of the ſun and rain; and the hedge, which promiſed to grow at the firſt, becomes ſtunted and puny in a few years. Hence, except in a few places where the ſoil, bottom, and expoſure, are uncommonly favourable, there are few hedges in the county defenſible, without perpetual and expenſive repairs with dead wood. The expence of making theſe ditches, with plants and a cocking of wood, is from 2s. to 2s. 6d. per fall, a meaſure of 18 feet 6 inches, uſed in the country. When it is conſidered to what extent incloſing has been carried, it will appear, there has been a great deal of money very unprofitably laid out. Some people now begin to be ſenſible of the general error, and, inſtead of clap ditches, make mounds ſolely of earth collected from the ſurface, faced up

with ſtone or green ſod, mix the collected ſoil with manure, and plant the hedge on a border along the top. This ſeems to be the manner in which all the old hedges, that remained good, have been done. As the white thorn, though it makes a formidable hedge, when it thrives, makes but a poor figure in a barren ſoil and expoſed ſituation, it is now common to plant a third or fourth part of beeches, intermixed with the thorns; the former being found to be a hardier, more thriving plant, than the latter, and conſequently better adapted to ſhelter a ſtormy country, as well as to ſtrengthen the fence. It is probable this may be a conſiderable improvement in incloſing; but there are often ſo many barren ſpots, from the out-ſkirting of the mineral ſtrata, and the like, occur in the lines where it would be wiſhed to draw fences, on which no plants can thrive, that incloſing can never be ſo general, or ſo ſufficient as it ought to be, till ſtone walls be more in uſe. It is unfortunate that much of the ſoft ſtone found near the ſurface moulders in the air, through time, and is therefore leſs durable in fences. In the light ſoils of the upper ward, thorn hedges frequently fail for want of moiſture. Here raiſed mounds would make the matter worſe. In ſuch caſes, the beſt way of raiſing thorn hedges would probably be, to ſummer fallow the line on which the hedge was to be planted, about 10 feet wide, freeing it completely of the roots of weeds, and working a good quantity of dung into it. The edges of this might then be turned up towards the middle, in order to thicken the ſoil, and the hedge planted in the centre. Elm plants, which delight in a dry open ſoil, and ſubmit very well to be dreſſed and pruned as a hedge, might be ſubſtituted in place of beeches. Hedges would perhaps ſucceed in this way, where they fail in clap dikes; but there are ſtripes running through this kind of ſoil as unfavourable as the out-ſkirting of the mineral ſtrata. Theſe are of dry ſand and gravel for a conſiderable depth: They are called ſcalds by ſome of the Engliſh huſbandmen. For ſuch places there is perhaps no remedy but a dead fence.

ART. 2. *Draining.*—There is nothing of great conſequence to be obſerved with reſpect to draining. In all the clay country, the great buſineſs is to carry off the ſurface water, which can only be done in open drains. The numerous ditches made for incloſing, already mentioned, though frequently not anſwering the intended purpoſe, are very uſeful conductors of water. The draining of clay ground is principally performed by the manner of laying out the ridges, which will be taken notice of under the following branch. Where larger receivers than the ordinary furrows are needed, it is thought the moſt eligible way to make the ſides of them very much ſhelving, as recommended by the late Lord Kames; but contrary to what he adviſes of doing them with the plough, it has been found that they are always cheapeſt and beſt executed with the ſpade. When land is drained, which is wet from other cauſes, ſuch means as have been uſed in other parts of Britain, and will probably be deſcribed in other Reports, have been uſed here. It may only be obſerved, with reſpect to hollow or covered drains, that thoſe which have as much declivity, as circumſtances will admit, filled with plenty of ſtones, and the uppermoſt made very ſmall, continue longeſt ſerviceable; ſo that thoſe which are executed at the greateſt expence at firſt, frequently turn out cheapeſt in the end.

SECT. 2.—*Tillage or Cultivation, with the Implements of Huſbandry uſed.*

ART. 1. *Tillage.*—Summer fallowing is practiſed for different purpoſes. It is either with an intention to free the ground from weeds, to give the ridges a proper form and direction for throwing off the ſurface water, or to open and mellow a denſe ſtrong ſoil. In all light ſoils, weeds multiply quickly, and frequent recourſe muſt be had to Summer fallowing to deſtroy them: but ſince the turnip huſbandry has been introduced into the upper part of the county, the land is fallowed in the Spring and beginning of Summer, and turnips ſown upon it, in drills. The cleaning

of the ground is completed by hoeing the intervals; and an entire Summer fallow is ſeldomer uſed. In the light ſoils, in the lower part of the county, the land is too high rented for the turnip huſbandry; and potatoes, for which there is great demand in that populous diſtrict, are ſubſtituted in the place of turnips, and the ground cleaned by hoeing them attentively. In the clay ſoils, a great part of the land has been Summer fallowed, principally for the purpoſe of draining it, by giving a proper form and direction to the ridges. Various forms and ſizes of ridges have been tried for this purpoſe; but that which ſeems now to prevail moſt, is ridges from 13 to 15 feet wide, properly rounded, and not raiſed very high. To keep clay ground dry, it is found neceſſary to conſult nature, and make the direction of the ridges follow the courſe of the declivity, making drains acroſs, whenever the water does not follow the furrow; but when water can be led away without ſuch croſs drains, it is much to be preferred. In the more elevated parts of the county, where the expoſure is deemed too ſevere for wheat, the land lies longer in paſture, and Summer fallow is leſs frequently repeated. On the lower grounds, huſbandmen go round their farms, Summer fallowing as much yearly, as they can procure manure for, in order to ſow wheat. Part of the light land, both in the upper and lower parts of the county, undergoes a Spring fallow for barley; but barley has ſucceeded ſo ill, for many years paſt, on the clay grounds, that the culture of it is almoſt abandoned. This perhaps is much owing to the farm dung being moſtly conſumed for raiſing wheat. For all other crops ſeldom more than one ploughing is given. In ſome parts of the county, the ploughing is begun ſoon after the harveſt is over, but it is more general not to begin till after the 1ſt of January; and in froſty or very rainy ſeaſons, there is frequently much land to plough when March comes in.

In heavy ſoils, it is common to put three or four horſes to the plough. Some huſbandmen have made a late improvement of making the fore and hinder horſes draw from dif-

ferent points of the beam, ſo that the two lines of draught may coincide. In lands that are light and eaſy, in the latter ploughings of Summer fallow, or in breaking up turf, with an ebb furrow, two horſes without a driver are now frequently uſed. There are, however, many intelligent huſbandmen, occupying the heavy clay ſoils, who make very little uſe of the two horſe plough: nor do they reject it from prejudice, but ſupport their conduct by cogent arguments, which it may be proper here to ſtate, and leave them to the judgment of the reader.

The clay ſoils in this county have almoſt always a denſe argilaceous ſubſtratum (generally called *till*), ſo much of the ſame nature with the ſoil above it, that the particles of the latter, which are waſhed down with the rain upon the former, aſſimilate with it into one maſs, and the till bottom ſeems to approach to the ſurface. When this is allowed to take place, rain, when it deſcends, is retained upon the top, the roots of plants are chilled by its ſtagnating there, and the crop fails; for which reaſon, it is found neceſſary to plough the ground, once or oftener in every rotation, very deep, in order to allow the water to deſcend through the opened ground, and the roots of plants to expand freely. But though the improvements made in the conſtruction of ploughs has conſiderably increaſed the powers of draught, ſo ſtrong is the adheſion in theſe clay ſoils, that a pair of the beſt horſes are frequently unable to overcome the reſiſtance, when the ploughman aims at the neceſſary depth. He is naturally led, therefore, to lighten the draught, that the horſes may more eaſily proceed; and the work comes inſenſibly to be more lightly executed than circumſtances require. It is, therefore, thought neceſſary to have four good horſes in the plough, with a boy to drive them, that the ploughman, having nothing to attend to but the execution of the work, may make it of a proper depth and regularity. The huſbandmen alluded to, farther urge, that the advantage of two horſes in a plough without a driver, inſtead of four with one, is rather apparent than real, in heavy ſoils where

the reſiſtance is conſiderable; for they aſſert, that, when the days begin to lengthen, and the ground becomes dry, four horſes and two men will plough an acre and an half in a day, and that one man, with a pair of horſes, will not execute more than the half in the ſame time. They do not, however, altogether reject the two horſe plough, uſing it generally for the latter ploughings of Summer fallow.

Even where the ſoil is leſs denſe and obdurate, it would probably be proper to plough ſomewhat deeper than ordinary, every third or fourth year. In all ſoils, the fineſt parts muſt be waſhed to the bottom of the ſtirred ground, and the uſe of it be loſt while it remains there. If a ploughing deep enough to bring this up cannot be managed with two horſes, more power ſhould be added. A pair of oxen might be kept on a farm for ſuch purpoſes, to great advantage, and very little additional expence.

ART. 2. *Implements of Huſbandry.*—The ploughs uſed here are, 1*ſt*, The Scotch plough: this is now frequently ſhorter in the head, ſtilts, and beam, than formerly, and ſome other improvements made upon it. It is preferred for ploughing ſtiff land, when only one ploughing is given, as it ſets up the edge of the furrows moſt properly, and furniſhes a plentiful mould for the ſeed. It is generally uſed for the firſt turning of fallows; and ſome farmers uſe it for all purpoſes. 2*d*, Small's plough, ſometimes with and ſometimes without a chain: It is preferred for the after turnings of fallow; and ſome uſe no other for any purpoſe. 3*d*, A little plough, brought to this country a good many years ago from Northumberland: it ſeems to be the ſame with that deſcribed by Lord Kames, under the name of the Rotheram plough, and has been found to anſwer very well for different purpoſes. 4*th*, The Rutherglen plough: it is chiefly uſed, in that neighbourhood, for turning up the deep ſoil of the valleys with a ſtrong furrow.

The common harrows, which are ſtill the moſt generally uſed, with four bills or beams, containing 20 teeth, are much the ſame as have been deſcribed in the Reports from other

counties. It is found neceſſary, both for reducing ſtiff ground, and collecting the roots of weeds, to give the teeth a conſiderable bevil forward, ſo as to ſtand at an angle of from 70° to 75° with the plain of the harrow. There are others heavier, commonly called *brakes*, of different weights and conſtructions, according to the fancy of the owner, and the purpoſes for which they are intended. Of late, pairs of jointed harrows have been introduced, each having three bills, and the pair connected by joints, by which, while they are kept together, they are allowed to ply to the ſurface; the teeth are alſo placed ſo as not to follow one another directly in the line of draught. Theſe are drawn by a pair of horſes, and have been found to be very executive.

The roller is an important implement in the culture of the fields. Beſides ſmoothing the ſurface, and bruiſing clods, to forward pulverization, the uſe of it can never be too much recommended for condenſing open ſoils, in the droughts which frequently ſucceed the ſeed time. Even in the heavy ſoils, which are for the moſt part but too ſolid, the application of the roller is of great importance, during the droughts of the Spring. By preſſing down the mellowed clods around the roots of young graſs and wheat, the plants are reanimated, and a freſh luxuriancy ſoon appears. By compreſſing the ſurface of fields ſown with Spring corn, which, however ſolid they may naturally be, heave with the Spring drought, the interſtices are cloſed, the moiſture retained, the roots of the corn faſtened, and the progreſs of the vermin which prey upon them checked. Mr. Cook's diſcovery, publiſhed ſome years ago, that ſnails and ſlugs, which come to the ſurface after the ſun goes down, may be deſtroyed by rolling in the night, merits attention. The rollers here are of free ſtone, or of ſolid timber, and very rarely of caſt iron, this laſt being too dear for common huſbandmen; but the moſt approved rollers, and which are now getting pretty much into general uſe, are hollow cylinders built of wood, the circumference clothed round with ſtrong plank; the diameter is about three feet, and the rol-

ler is divided into two equal parts, which turn round on an iron axis. The largeneſs of the diameter makes the draught ſo eaſy, that one horſe can pull as much weight as two could do of ſolid ſtone, and the diviſion of the roller into two parts facilitates the turning, the half on the inſide moving back, while that on the outſide comes forward.

The drilling inſtruments are, the turnip drill, and one which, by changing a nut upon the axis which turns round at the bottom of a hopper, ſows either beans or ſmaller grain. Both of theſe ſow only one drill at a time, and are uſed chiefly in the upper part of the county, the heavy ſoils lower down being leſs adapted to the drill huſbandry. The inſtruments uſed for horſe-hoeing, are ſmall ploughs of different conſtructions, all of them very ſimple.

It is needleſs to deſcribe the ſpade, the hand-hoe, the wheel-barrow, &c. ſimple inſtruments which, in the hands of the dextrous and intelligent labourer, are perhaps not much leſs important than all the machinery which has yet been invented for cultivating the ground.

An inſtrument compoſed of two ſticks joined by a pin, and reſembling the ſmith's tongs in appearance and uſe, is applied to pull thiſtles and docks in the corn fields. In all caſes where the hoe cannot be uſed, if ſmaller weeds appeared to prevail ſo much as to injure the crop, women and children uſed to be employed to pull them with the hand; but from the ſcarcity of ſuch hands, and the high price of labour, this is almoſt given up. Huſbandmen now, when annual weeds appear to prevail much among the Spring corn, harrow the ground while the weeds are young, and their roots have not taken a deep hold. In this way the moſt of them are deſtroyed, and the corn which is deeper rooted, ſo far from being injured, is benefited; for though a few plants be torn up, the reſt is invigorated by the ſtirring of the earth, and thrives and tillers more abundantly. The ſame practice is ſucceſsfully uſed with peas and beans. If harrowing has been neglected, and wild muſtard, which is the moſt frequent weed, prevails, the flowery heads are

cut off with the ſcythe, when it is in full blow, without injuring the corn.

The carts of this county ſtill are moſtly of a plain and ſimple conſtruction, at the ſame time light and ſtrong; but of late, many alterations and new conſtructions are introduced, which probably tend much more to inflame the expence than to add to the conveniency. Indeed, refinements of this kind ſeem to be unwiſely followed in the conſtructions of many implements of huſbandry, and particularly in carts, harneſſing, &c., ſo that a horſe ſeems to groan under a load of iron and leather without any good purpoſe being ſerved. But the iron axle ought certainly to be excepted, as it compenſates in durability and diminution of friction, the expence of purchaſe and the weight it adds to the carriage. The general effect, however, of all ſuch refinements, is to abſtract a part of the ſtock of huſbandmen from its proper employment. Carts are drawn by a ſingle horſe, experience having evinced that, in this way, the animal is capable of the greateſt execution.

The ſickle is almoſt the only inſtrument uſed in reaping. Several mowing inſtruments have been introduced, but ſoon given up; and now that threſhing mills are coming much into uſe, it is probable the uſe of the ſickle will be ſtill more confirmed, as corn thus reaped is in beſt order for threſhing in the mill.

Every farmer has fanners, and there are now a good many threſhing mills in different parts of the county. Where theſe are wanting, a conſiderable part of the corn is threſhed with flails by the farm ſervants, in the winter mornings, by candle light.

SECT. 3.—*Manures, or Subſtances applied to fertilize the Soil.*

This ſection may be divided into three articles, treating, *1ſt*, Of the manures uſed; *2dly*, Of their effects; *3dly*, Of ſubſtances which may be uſed as manure.

ART. 1. *Manures uſed.*—Little marl of a valuable quality has hitherto been diſcovered in this county; ſome has

been found under the moſſes in the elevated parts of Carnwath pariſh and Leſmahagow, and laid upon the land with good effect; but the land is too high there to encourage the culture of corn to any great extent, and the diſtance too great to carry the marl with advantage to the corn lands lower down. Marl of an inferior quality is alſo ſeen in ſeveral places in the lower part of the county. It lies moſt commonly between two ſtrata of the free ſtone rock, and would probably be found expenſive to work. Beſides, it is only found in thoſe parts of the county where clay is the prevailing ſoil, and theſe clay ſoils ſhow ſymptoms of poſſeſſing calcarious ſubſtance, by effervеſcing with acids; ſo that clay being alſo the predominant part in the marl, there is probably too ſtrong an affinity between the manure and the ſoil, on which it could be moſt conveniently applied, to produce any conſiderable effect. Lime, therefore, is almoſt the only foſſil uſed for manure, and it is now become very dear, as much as will load a ſingle horſe cart being ſold at the kiln from 6s. to 8s. It is applied either upon fallow or graſs grounds, at the rate of from 300 to 600 Wincheſter buſhels per acre. The firſt time land is limed, its fertility is viſibly increaſed. If it is moderately cropped, and allowed to reſt for ſeveral years, the effects of the ſecond liming are ſtill more conſiderable: but all after limings have very little effect, and there is now land in this county, on which it proves quite vain to lay lime alone. For which reaſon, thoſe who cannot procure enough of other manure, compound lime with ſcourings of ditches, cleanings of roads, and ſome kind of ſurface earth having a cloſe turf of graſs, with a little dung between the layers of earth *. This has been found to anſwer the expence, when lime alone would not. It has been found very beneficial to lay lime upon well ſwarded paſture, and allow it to lie on the ſurface for two or more years before the land be ploughed and cropped. Where few corn crops were taken at a time, and the

* It is ſtudied, as far as circumſtances will admit, to lay compoſt of the lighteſt quality on the heavieſt ſoil, and vice verſa.

land left long in graſs, before being again broken up, the meliorating effects of this practice have been almoſt incredible. Beſides lime, and the dung, and compoſt made about the farm, horn-ſhavings, ſoot, woolen rags, parings of leather, peat earth reduced to aſhes, and coal aſhes, when they can be had, are uſed as manures; and in the neighbourhood of a town, dung is brought from thence. From the city of Glaſgow, in particular, dung is carried for ſix or ſeven miles round: and the preparation of an acre of land, for wheat, when the fallowing, dung, carriage, &c. is valued, coſts from 12 l. to 14 l.

Some experiments of gypſum, for a manure, have been made; but the expectations raiſed by the accounts from America, &c. of the great ſucceſs attending this practice, have been diſappointed, the application of gypſum having produced little or no additional fertility.

Irrigation, by ſtreams of water led over the ground, has been little practiſed here, except on the little ſwampy meadows above noticed; and theſe are flooded rather with a view to the ſubſtances which the water carries along with it, and depoſits on the meadow as it glides along, than on account of the fertility which water itſelf beſtows. It is not probable that irrigation will ſoon become common in this county. In the upper parts, where the ground is light and the ſubſoil open, it might, no doubt, be advantageous, wherever a command of water could be had; but in the clay ſoils, where the ridges are rounded for the ſake of ſurface draining, it would be difficult to ſpread water over the ſurface; and if it could be done, the ſweet herbage would ſoon be deſtroyed, and coarſe aquatic plants raiſed in its place. The general practice of alternate tillage and paſture is alſo inconſiſtent with watering. Irrigated grounds ſhould be kept in perpetual meadow. In other counties of Scotland, where graſs grounds have been irrigated, with a view to tillage crops, a few abundant crops have generally been produced, but the ground left in a wretched ſtate after them.

ART. 2. *Of the effects of the Manures uſed.*—The old huſbandmen did not ſpread the lime upon the ground till it was completely ſoaked with water, and ſtuck together in lumps. It is probable they were frequently in the right. The poor ſoils, on which it was often laid, poſſeſſed very little vegetable ſubſtance on which cauſtic lime could act; and the principal effect of the lime likely was, to add to the calcarious ſubſtance when it was deficient, and to ſeparate the parts of a ſoil which was too denſe; by which the land was better prepared to receive advantage from dung, and ſuch like manures. Accordingly we find, that lime alone, when laid upon poor ſoils which produce little herbage, has but a ſlender effect in increaſing the fertility. It is agreed, however, that though the ſtalk is not much more vigorous, the grain is plumper, and the herbage is ſweeter, when the land is laid in graſs. Lime is now more frequently laid on while it is in ſome degree powdery; and when it is applied to graſs grounds, the ſurface of which are covered cloſely with a growth of moſſes and decayed herbage, the effects of it very ſoon appear, by conſuming the old turf, and raiſing a pleaſant verdure. But to derive benefit from lime on poor land, it is found neceſſary to compound it with good ſurface earth, or moſſy earth, and in this way it has never failed to ſucceed. Lime is alſo laid on fallow ground, but the effects of dung are always more powerful. That very ingenious and induſtrious nobleman, the Earl of Dundonald, to whom the public is indebted for ſo many valuable diſcoveries, ſpent the Summer 1794 in this county; and, with his uſual zeal and activity for the public good, made a number of experiments on ſubſtances which might be uſed as manures for different ſoils; a treatiſe on which he ſoon after publiſhed, and in this the inquiſitive reader will find a great deal of information. His Lordſhip found that peat earth, hitherto thought ſo uſeleſs, might be rendered valuable manure, by mixing it with new ſlaked lime; and this is now begun to be put in practice.

Horn-ſhavings, are a powerful manure on land poſſeſſed of

vegetable ſubſtances, but the effect is leſs conſiderable on very poor ſoils.

Woolen rags act powerfully for one year. Parings of leather tend to open heavy ſoils; but they rot ſlowly, and have not a ſudden effect.

Peat aſhes are either made by paring and burning the ſurface of moſs, in order to fertilize the ground itſelf, or by burning the ground on the borders of moſſes in heaps, and carrying the aſhes to the firm ground near. In the former caſe, very great fertility is produced at firſt, but, in a few years, theſe aſhes, inſtead of producing uſeful plants, bear nothing but a kind of tall growing moſs. In the latter, fertility is increaſed for a few years without any viſible bad effects afterwards. But pure peat earth cannot be burnt till it is cut in ſmall pieces, and thoroughly dried, and it yields but a ſmall quantity of aſhes. Aſhes, in quantity, can only be made of the rotten earth about the borders of moſſes, in which there are a great deal of the living roots of plants. Coal aſhes are beſt when ſoaked with urine, &c.

The dung collected in towns is the moſt powerful manure. The dung of the farm yard, that is, the dung and litter of the live ſtock, has ſometimes ſurface earth or moſs mixed in it to increaſe the quantity. It is carried to the fields, ſometimes twice, ſometimes only once, in the year, but never turned. The huſbandmen of this county are ſurpriſed to hear it recommended from other places, to turn dung over, and lay it up looſely, to admit the air and haſten the putrefaction; as they find that the dung which has been moſt condenſed by the trampling of cattle is the beſt.

ART. 3. *Of Subſtances which may be uſed as Manures.* —There is ſome cauſe to believe, that the earth frequently contains in its bowels ſubſtances capable of fertilizing its ſurface, if the proper application of them were underſtood; and it would be a matter of great importance, that experiments were ſet on foot for making ſuch diſcoveries. The blaiſe or ſhiver, accompanying the coal, mentioned in a former part of this Report,—a kind of indurated ſchyſtus, which

ſometimes ſkirts out in the faces of banks, and moulders down with the weather. At firſt it appears quite barren, but after lying ſome time expoſed to the influence of the ſun and air, it not only fertilizes the ſoil on which it falls, but, where it accumulates to a body, ſhows great ſigns of fertility itſelf, plants growing in it with great luxuriancy. The noble Lord above mentioned, ſtrewed one kind of blaiſe which he found here, reduced to powder, about the roots of growing corn, and in a ſhort time the deep verdure and luxuriant growth diſtinguiſhed that part from the reſt of the field. Theſe ſchyſts might be had at coal mines, and at many places where they ſkirt out at the ſurface; and when they were found, upon fair trials, to have a fertilizing effect, might probably be uſed as top dreſſings with great advantage. The ſame noble author, and all the writers on chemiſtry, agree, that magneſia promotes, in a very conſiderable degree, the growth of plants. Much of it is ſaid to be contained in the ſteatities, or ſoap rock, which is found in different places of this county. Urine might be collected in towns, and carried to the country, which, poured on other ſubſtances, would greatly enrich them for manure.

### SECT. 4.—*Plants cultivated, and Rotations of Crops.*

ART. 1. *Plants cultivated.*—Wheat is cultivated on all parts, by intervals, which are thought favourable for that grain. On open porous ſoils, ſweating bottoms, and elevated ſituations, the plant has not been found to thrive, nor the ear to arrive at full perfection. It is ſown either on fallow, or after potatoes, and more ſeldom now, after oats, or peas and beans. The time of ſowing is from the end of Auguſt to the 1ſt of November: Spring wheat is ſeldom ſown, and ſeldomer ſucceeds.

Different kinds of ſeed wheat have been uſed, particularly the bearded wheat, which prevailed much for ſome time: but there is now ſcarce any other than the common white and red, the ſeed of which farmers mutually exchange with one another. The fallowed ground is manured for

the wheat crop with dung from towns, when within reach, or with farm dung and lime, ſometimes with horn-ſhavings, (a quantity of which is annually commiſſioned from Ireland by the huſbandmen of the county) and leſs frequently with woolen rags. Wheat ſeed is commonly ſteeped in a ſtrong pickle of ſea ſalt and water, and dried with hot lime, ſometimes ſprinkled with urine or the mephitic water of a dung-hill, and dried the ſame way. This is intended to prevent the ſmut; but a number of experiments concur in proving, that the cauſtic lime, incruſted round the ſeed, has the principal effect. It ought here to be obſerved, that wheat ſown after the middle of October, is always in more danger of ſuffering from the ſmut, whatever precautions may have been taken, than that which has been earlier ſown. The quantity ſown is from 7 to 12 pecks, Linlithgow meaſure, per Scots acre; the produce from 8 to 16 bolls of the ſame meaſure.

Oats is the principal Spring corn; from two-thirds to three-fourths of the land tilled is ſown with this ſeed. Different varieties of this grain are ſown. Two have been known in the county for time immemorial; namely, late ſeed, ſown in the lower and earlier grounds: this ſeems to be much the ſame with what is called Halkerſton or Angus oats in the neighbouring counties; the other is called early ſeed, and is ſown on higher and later grounds: it is an inferior grain, but ripens quicker, and produces a good deal of ſtraw. To theſe may be added, early Tweeddale and Blainſly oats, both of which have been long ſown here. Their time of ripening is between that of the two former, and they are not deficient in ſtraw. There are ſeveral other kinds of early oats which have been more recently introduced; ſuch as the Poliſh and Eſſex oats, the Frieſland or great Dutch oats, and the red oats; this laſt has indeed been long known about the head of the county, under the name of ſmall barley corn. Theſe ripen early, but the ſtraw is ſhort, and unpalatable to cattle as fodder. Some of them ſhake very eaſily with the wind; but they are ſtill of importance

in backward ſeaſons, as they do not fail to ripen and produce plump grain. Oat ſeed is never ſteeped; but ſome have ſpread it on the barn floor, and ſprinkled it with ſalt, turning it from time to time, till the ſalt had liquified and moiſtened the grain. This practice ſhould be more general, as it certainly has a tendency to defend the young corn from the devaſtations of the numerous tribes of the caterpillar kind, which lodge in the earth in the Spring time. A very intelligent correſpondent, whoſe accurate obſervation and veracity may be depended on, informs, that he has long been in the cuſtom of bringing ſeed oats from the ſea coaſt, where the air is ſomewhat impregnated with the ſaline particles raiſed in ſpry, and that he has uniformly obſerved the crops of this ſeed eſcaped the injuries of land vermin, while others around ſuffered greatly. If the ſmall quantity of ſalt this grain could draw from the air, while growing, is thus effectual, it may be preſumed, that ſoaking the ſeed with ſalt ſhould not be leſs ſo. It is certain, that ſalt deſtroys all the kinds of vermin which creep in the earth, and devour the roots of plants in the inland country; and it is a pity that, for the ſake of a tax ſo unproductive of revenue, huſbandmen ſhould be deprived of the benefit of it. From 12 to 18 pecks of oats, of the ordinary meaſure of the county, which is ſomewhat larger than the Linlithgow barley meaſure, is ſown on an acre; and the produce varies from 4 to 18 bolls per acre. Peas and beans ſeldom come to perfection on high expoſures, and therefore are chiefly cultivated on the lower grounds. They are ſometimes ſown ſeparately, ſometimes mixed, and very rarely in drills. The beans ſown here are ordinary horſe beans, and a kind of late grey peaſe uſually accompany them. Huſbandmen frequently bring a change of ſeed from the Kerſe ground on the banks of the Forth, which is found to be an advantage. Grey Haſting peaſe are ſometimes ſown alone; the ſtraw of theſe is not ſo bulky, nor the fodder ſo good, as the late. Beans are ſown as early as the ſeaſon will permit, ſometimes on the ſurface, and ploughed

in with a light furrow; from 14 to 18 pecks, wheat meaſure, are ſown on an acre. They are ſometimes very productive, yielding 18 bolls of the ſame meaſure an acre: in rainy ſeaſons, or when autumnal froſts come in early, they are ſometimes good for little.

Small quantities of flax are ſown through all the county, and in ſome particular places a good deal is annually raiſed; eſpecially in the pariſhes of Eaſt and Weſt Monkland, at one end of the county, and that of Carnwath, and the pariſhes around it, at the other end. Much of the flax produced in the former, is very valuable. Flax raiſers rent land proper for it, at from 4 l. to 7 l. per acre; and there may be about 200 acres thus occupied annually. Women who purchaſe this flax, ſpin from three to five ſpindles of yarn out of a pound *, which they ſell to manufacturers, to be wrought up into lawn and lace thread. The flax of the latter is of a coarſer quality, and is ſpun by the women in the farm houſes and villages, into very uſeful yarn, from one ſpindle to half a ſpindle per pound, large quantities of which are ſold in the markets of Lanark, Carnwath, Biggar, &c.

The Spring ſeed time is very uncertain, depending on drought occurring, ſufficient to dry up the Winter's moiſture. It is ſometimes begun about the end of February, and ſometimes ſcarcely finiſhed againſt the 1ſt of May. Potatoes are planted from the middle of April to the middle of May, principally in drills made by the plough, from two feet ſix inches, to two feet nine inches aſunder. There have been inſtances of upwards of 24 tons of potatoes being taken from an acre; but the produce is frequently below half that quantity. It has been obſerved, that the more frequently potatoes are returned on the ſame ground, the produce is the leſs. The diſeaſe, called the curl, alſo frequently occaſions a great deficiency in the produce on the lower grounds, it not yet being prevalent on the heights, though it ſeems to be creeping upwards. No ſatisfactory diſcoveries having

* A ſpindle is a parcel conſiſting of 48 cuts; each cut is 120 threads round a reel of two and a half yards circumference.

yet been made of the cauſe or cure of this diſeaſe, it muſt be left for future inquiry. Barley is ſown from the middle of April to the end of May. Lincolnſhire and Siberian barley were introduced into this county for ſeed, and were ſomewhat in vogue for a time; but both theſe and the Tartarian oats, which were alſo pretty frequently ſown, ſeem now to be entirely laid aſide. The only kinds of ſeed now uſed are, the barley with two rows of grains in the ear, and the Bear, Big or Cheſter barley, as it is called in different places, with four rows, both of which are well known. Barley is ſometimes ſteeped to forward its growth: but when drought continues long after ſowing, if the land is not well pulverized, the ſeed is in danger; its roots, ſpringing with the moiſture it contains, are withered and die. From 8 to 10 pecks are ſown on an acre; and as many bolls are reckoned a good crop. Turnips are ſown from the end of May to the 10th of July; and, in dry early land, ſometimes later. Few field cabbages, or greens for feeding cattle, are yet cultivated. The graſſes cultivated are, red, white, and yellow clover, rye graſs, and rib graſs. The ſeeds of the holcus lanatus, and of ſome other native graſſes, either ſaved in the field, or collected in hay lofts, are ſometimes ſown inſtead of rye graſs. Sometimes only red clover is ſown along with a little rye graſs; ſometimes a mixture of more, or all of the above, are ſown on the ſame field, according to the purpoſe for which it is intended. Graſs ſeeds are either ſown among young wheat in the Spring, or along with oats or barley. Graſs after wheat generally ſucceeds the firſt year, but is better the ſecond year when ſown with barley. In ſome parts of the county, it is obſerved, that clover is ſurer on a field from which two ſucceſſive white crops have been taken, than where there has been only one.

An obſerver reſiding in a diſtant province, miſtaking what is here advanced as a fact, to be laid down as a principle, ſays, this doctrine will not go down in theſe days. Though it had been obſerved, in many inſtances, that clover not only ſprang more regularly, but grew more luxuriantly,

after two ſucceſſive white crops, than after a green and a white one, the aſſertion was made with caution, leſt it might not always be the caſe: but the author has had ſome ſtrong inſtances of it under his eye this ſeaſon, and is perſuaded it is invariably ſo. If the obſerver, therefore, is diſſatisfied that nature does not act according to his ſyſtem, he may change her operations if he can.

*Of Plants not commonly cultivated.*—The public could derive no inſtruction from any hiſtory, which could here be given, of the culture of plants not commonly cultivated, there not being accounts ſufficiently authentic to determine whether ſuch plants have failed of being more extenſively propagated, from their not being adapted to the ſoil and circumſtances, or from want of due attention to the culture. There is no claſs of men leſs fit for new and curious inquiries than huſbandmen. Habit has confined them within a routine which admits of few material variations; and both mind and body are ſo much occupied with their ordinary labours, that neither leiſure nor diſpoſition are left to look after new ones. It is only among people who follow agriculture, either for amuſement or partial employment, that the exiſtence of that inquiſitive turn, which leads to diſcovery, is to be found. But theſe people are frequently too ſanguine, not always happy, in chooſing the ſubjects of their experiments, and often diverted, by other circumſtances, from purſuing them to the final point. Hence the culture of different plants has been introduced, and dropped, without it being poſſible to decide, all circumſtances conſidered, whether the more extenſive culture of ſuch plants would have been beneficial or not. It may be ſaid, however, that ſince the introduction of artificial graſſes, potatoes, and turnips, the culture of no plant of general utility has taken place in this county; and from thence an inference may be drawn, that every kind of culture, of ſuch deſcription, will, at length, find its way of itſelf.

ART. 2. *Rotations of Crops.*—Rotations are as various as the climate and the ſoil. It will be ſufficient to mention a

few, in different parts of the county. Among the light ſoils of the upper ward, the two following are the moſt prevalent: By the firſt, the whole arable land is divided into eight parts, and each in its turn undergoes the following rotation; 1*ſt* year, fallow or turnip in drills and dunged, and a portion in potatoes; 2*d*, barley and ſown with graſs ſeeds; 3*d*, hay; 4*th*, 5*th*, and 6*th*, paſture; 7*th* and 8*th*, oats. According to the ſecond, the half, or as much of the farm as is judged convenient, is laid out in four diviſions, each in its turn managed as follows; 1*ſt* year, fallow or turnip, &c. 2*d*, barley or oats with graſs ſeeds; 3*d*, hay; 4*th*, oats. The remainder of the farm lies in graſs, and is paſtured by the dairy cows, cattle to be fattened in Winter on turnips, &c. A part of this is taken in at pleaſure, in exchange for a part of what has been kept in culture. In the light lands, in the lower part of the county, turnips are not cultivated; and there different practices prevail. The following rotation is the moſt approved: The farm is divided into five lots, each managed thus; 1*ſt* year, the land is Spring fallowed, well manured, moſtly with Glaſgow dung, and potatoes planted in drills, and kept clean by Summer hoeing; 2*d* year, wheat ſown as ſoon as the potatoes can be taken up, and graſs ſeeds ſown among the wheat, in the Spring; 3*d* year, hay, twice cut; 4*th* year, hay, once cut, and the after foggage paſtured; 5*th* year, the field having been manured with a compoſt of lime and ſome kind of earth, in the go harveſt, is cropped with oats. Sometimes barley is ſown, inſtead of wheat, the ſecond year; and ſometimes the land is Spring fallowed after the wheat and barley without manure, ſown with graſs ſeeds; and thus the rotation takes in another year. In the clay ſoils, in the ſame neighbourhood, the land undergoes a clean fallow, and is ſtrongly dunged for wheat. Beans ſucceed the wheat; oats, with graſs ſeeds, the beans, &c. Among the variety of practices which obtain in the middle country, the two following are prevalent: By the firſt, the land is Summer fallowed, dunged and limed, and wheat ſown;

beans and peas ſucceed the wheat; and oats, with graſs ſeeds, the peas and beans; the graſs is cut for hay, one or two years, and afterwards paſtured ſo long as it is thought proper to let it reſt. By the ſecond, the land is dunged or limed, or laid over with compoſt upon the graſs, and cropped, 1*ſt*, with oats or peas; 2*d*, with peas or oats; 3*d*, with oats, ſown with graſs ſeeds. It is the rule, in ſome caſes, to let the land reſt as many years as it has been cropped; in others, double that time. On the more elevated land, on the eaſt and weſt boundaries of the county, circumſtances are unfavourable to the rotation of green and white crops. There ſome kind of manure is laid upon the turf, two or three crops of oats taken, and graſs ſeeds ſown with the laſt. Some landholders have bound their tenants never to crop more than a fourth part of the farm, the reſt being occupied in paſture or hay. Some tenants, who are not bound, follow nearly the ſame plan, from conviction that it is beſt in their ſituation.

SECT. 5.—*Of Graſs Grounds of all kinds, and the purpoſes to which they are applied.*

Graſs grounds are naturally divided into two kinds, viz. 1*ſt*, Such as from ſituation and circumſtances are deemed unfit for any other purpoſe; 2*dly*, Thoſe which are laid in graſs, not only for preſent profit, but alſo in order to render them more profitable in tillage, when they ſhall be uſed in that way. The firſt kind muſt chiefly be uſed in rearing live ſtock; and, therefore, what relates to rearing may be included under that article. The ſecond is more frequently uſed to ſupply food to ſtock already reared, and fatten animals for the table; what relates to the proviſions derived from animals, will, therefore, come under the ſecond article.

ART. 1.—*Paſtures that are deemed unfit for any other purpoſe.*—Among the mountains, in the upper part of the county, flocks of ſheep are kept. About 50 years ago, corn was cultivated on ſome of the lower grounds, at the feet of

the mountains, more than ſufficient to feed the inhabitants; and many neat cattle were kept. At that time, the ſheep, more reſtrained on the ſummits and poorer paſtures, on many of which an animal can hardly live in a ſtorm, were ſmall, and of no great eſteem in the market: but a ſucceſſion of bad ſeaſons ruining the crops, has obliged the farmers to abandon agriculture; and torrents, from time to time, having brought down ſtones from the hill ſides, and choaked up the channels of the rivers and brooks, many of the little valleys are ſo frequently overflowed, that they are no longer capable of cultivation. Scarce any corn is now raiſed, few black cattle are kept, and the ſheep, now indulged in the beſt paſture, have increaſed in ſize. They bear very coarſe wool; but are extremely hardy, and much eſteemed by the Yorkſhire dealers. They are now reckoned fully equal to the beſt in the neighbouring counties. The flocks of the farmers formerly conſiſted of about 1000 ſheep each; but of late ſome individuals rent more land, and are poſſeſſed of from 3000 to 7000.

The deſpair produced by ſuch natural obſtacles againſt every attempt towards the improvement of the country, has, perhaps, been too eaſily admitted. Two different cauſes have contributed to ſtrengthen and confirm this deſpair; the effect which the arguments of philoſophical economiſts has produced on the conduct of landholders, and the invitations which riſing manufactures have held out to the people. But one inſtance of land cultivated here, probably of greater altitude than any other in the iſland *, will ſhow, that if the bent of the ſtock and induſtry of the ſociety were more applied to the improvement of their moſt important and permanent property, much might be done every where to increaſe fertility, even in the moſt unpromiſing ſituations.

The inhabitants of Leadhills find it neceſſary for their

* The height of the mountain Tintock has been ſtated at 2260 feet above the level of the ſea, and the ſite of Leadhills at 2000 feet; but ſome geometricians aſſert, that they have found the height of Tintock to be 2400 feet, and that Leadhills is nearly on the ſame level.

accommodation, to keep milch cows, which go to paſture in the neighbouring moor. The dung of theſe cattle is laid upon barren mooriſh ground near the village; this ground is levelled, formed into narrow ridges with the ſpade, and potatoes, turnips, cabbages, greens, &c. cultivated upon it, by the inhabitants at their ſpare hours. One ſpot has been laid down in graſs, and another taken up from time to time; and there are now a good many acres, naturally of the moſt barren ſoil, bearing graſs little inferior to that on the beſt land in the county. Beſides the vegetables above mentioned, and green food in Summer for a great number of cows, 9000 or 10,000 ſtones of hay are annually made, for Winter feeding.

Along both ſides of the county, ſo far as the moors extend, ſheep paſturing is followed; and the quality of the ſheep is in proportion to the paſture. Where the mooriſh paſtures are disjoined by the intervention of arable fields, the flocks are ſmaller, from 300 to 400, and a greater number of black cattle are reared. On the coarſe high land, on the eaſt ſide of the county, it has been found the moſt profitable practice to winter young black cattle. The paſtures are allowed to grow untouched, from the end of May to the end of Auguſt. The ruſhes, and ſuch other coarſe herbage as grow on the marſhy places, are mown, while tender, and laid up for Winter food. About the end of Auguſt, the paſture is ſtocked with ſmall young Highland cattle. They live upon the graſs, when the weather is moderate; when a ſtorm happens, the Winter fodder is given them on ſome ſheltered ſpot. When they can be accommodated with ſome ſlight ſhed, it is reckoned an advantage. The paſture neceſſary for wintering one of thoſe, is thought equal to that of five ordinary moorland ſheep of the firſt year; *(hogs.)* The cattle are ſold off in May, and are generally increaſed in value from 25s. to 30s. per head. In moſt of the farms in the elevated parts of the country, where a leſs proportion of the land is tilled annually, and the paſture leſs rich than in the lower

parts, it is the practice to breed a good many neat cattle, nearly about the half of what are brought forth; moſtly females, few oxen being reared in the county. Theſe feed on the paſtures where they are bred, and either ſupply the place of old cows diſpoſed of, or are ſold at three years old, with the firſt calf, at from 4l. to 7l., and ſince this Report was firſt printed, from 7l. to 10l. a head, according to their ſize and figure. In the lower parts of the country, fewer calves are reared; ſometimes no more than neceſſary to keep up the ſtock of milch cows. Moſt of the farmers through all the county rear young horſes, chiefly of the draught kind. In ſome caſes, one foal, in ſome, two are reared, on a plough gate annually, according to the quantity of paſture that can be ſpared, for feeding nurſing mares and colts. Thoſe who Summer fallow much of their farms, and have much manure to carry from a diſtance, rear no foals, and prefer geldings to mares for performing their labour.

The natural meadows, repeatedly mentioned, are ſaved always for hay. The bottom being cold and ſwampy, the graſſes ſpring late in the ſeaſon, and the hay is not cut before the beginning of Auguſt. The ſituation being damp, and the hay ſoft, it is frequently got with difficulty, and ſuffers in the making, both in colour and flavour. About 50 years ago, this was almoſt the only hay in the county, and the ſtables of inns, &c. were ſupplied with it; but ſince the culture of artificial graſſes became general, it is no longer a ſubject of commerce, and is conſumed by the live ſtock on the farm.

ART. 2. *Artificial Graſs, Dairy, and Feeding.*—The firſt crop of ſown graſs is generally mown for hay. The hay harveſt commences about the beginning of July. Hay making is conducted different ways. Some new haymakers mow only when the weather is fair and the graſs dry. Rakers immediately follow the mowers, and put up the hay into very ſmall cocks; it is afterwards turned daily, the ſize of the cocks being increaſed as it dries, till it be ready for treading up in field ricks. However this practice

may ſucceed in the ſouthern counties of England, it does not ſeem to be well adapted to the ſtate of this country. Unleſs the weather be uncommonly favourable, the hay always ſuffers ſomewhat in colour; and under repeated rains is greatly injured. Many of the moſt expert huſbandmen now follow a very different mode. The hay is allowed to lie in the ſwathe for three or four days, and then, if the crop is not heavier than from a ton and a half to two tons per acre, it is raked together, in a dry time, and immediately tread up into round or oblong ricks in the field, where it ſtands till it is thought to be in condition to be put ſafely into large ſtacks. Very heavy crops muſt be turned in the ſwathe, and both ſides expoſed to the drought; and when great rains have occurred, all the hay muſt be turned. What lies immediately under the ſhade of trees or hedges is removed towards the middle of the field, and allowed to lie open to the drought for a few hours. In this cheap and ſimple manner hay is better preſerved than by more operoſe methods.

Few have attempted to ſave clover ſeed; but the ſeed of rye-graſs is frequently ſaved. When this is to be done, the hay is bound in ſheaves after the mowers, and ſet up in ſhocks for a week; the ſeed is then threſhed, or ſkutched off, and the hay put in the ricks.

For the moſt part, the latter growth, after the hay, is paſtured either by the live ſtock on the farm, or cattle bought for fattening; and as there are but few inſtances where a ſecond crop of hay is taken, the grounds which have been laid in graſs are paſtured the ſame way, ſo long as they are allowed to reſt, after the firſt year.

It was a prevalent cuſtom, in this county, to keep a great many milch cows, long before the profits of the dairy became conſiderable, or the management of it was underſtood, it being thought neceſſary to keep conſtantly a number of cattle for making dung to recruit the arable land. Theſe were led around the indifferent paſtures, in Summer, travelling a great deal to gather a moderate ſupport. In Winter

they were driven out to the fields, to endure all the viciſſitudes of the weather, through the day, and fed at the ſtall, in the evenings and mornings, with a little ſtraw; and were generally much reduced, before the return of the graſs. With this treatment, the quantity of milk which they yielded was little, and as neither the demand nor the price was conſiderable, the management of the dairy was little ſtudied.

The feeding of calves was the firſt object of profit. On the elevated lands, where the harveſt is leſs perfect, part of the unripened oats were taken to feed the milch cows, which increaſed the quantity and richneſs of their milk. The calves, which were brought forth, about the latter end of harveſt or beginning of Winter, were fed at firſt with the milk of their dams, and afterwards with the thicker milk of thoſe which were beginning to dry, having been taught, from the firſt, to drink all that they got. In this manner, rich veal was fattened and ſent to Edinburgh, from Chriſtmas, onward, to ſupply the tables of the wealthy, where Lanarkſhire veal has been long famed, and bought at exorbitant prices. In the progreſs of improvements in the country, a better proviſion of Winter food for cattle has been made, and, by feeding milch cows with potatoes, turnips, &c. the practice of fattening veal has been much extended of late; ſo that, though the increaſe of wealth and luxury has greatly enlarged the demand, the riſe of price, on this fine veal, has not been in proportion to that on other kinds of proviſions: however, in all places diſtant from markets, it is ſtill conſidered as the moſt advantageous way to diſpoſe of Winter milk.

As the prices of butter and cheeſe advanced, the owners of dairies, by degrees, became more ſtudious, not only to increaſe the quantity, by paying more attention to the feeding of milch cows, but to enſure a preference in the market, by adapting the quality to the taſte of the beſt cuſtomers. This was, however, confined, for a time, to the moſt favourable ſituations; thoſe who were leſs happily ſituated, attributing ſolely to ſoil and circumſtances what was in a

great meaſure owing to ſkill, attention, and cleanlineſs, were not eager in imitating, when they deſpaired of arriving at perfection. It was not till after the firſt peace of Paris, when the rapid progreſs of commerce and manufactures brought a new influx of wealth among the inhabitants, and greatly increaſed the demand and price of butter and cheeſe, that attention to the dairy became general. Freſh butter, eſpecially, became an indiſpenſible article at every breakfaſt table, and all that was made with care and cleanlineſs ſold quickly, at high prices. This ſtimulated the country houſe-wives, throughout the county, to ſtudy and follow the requiſites of the dairy: and now all the different articles, which it produces, are to be found, of an excellent quality, even in the elevated parts of the county, which were formerly deemed the moſt unfavourable; particularly within the reach of Glaſgow, where the opportunities of comparing, in a great market, prompts people to obſerve all the minutiæ neceſſary to bring their commodities to the greateſt poſſible perfection. A pound of butter, indeed, made on the high paſtures, is ſuppoſed to yield a little leſs oil than one made on the low; but the taſte and flavour is equally good, and the former is leſs apt to become rancid in keeping. The produce, too, is leſs, in proportion, on the former than on the latter. The dairy buſineſs is conducted three ways in this county: Either the whole milk is made into cheeſe, or butter is made of the cream, and cheeſe of the ſkimmed milk; or, in the moſt populous parts of the county, where there is a great demand for butter milk, as an article of food to the poor, the whole milk is churned. People are induced to adopt any one of theſe ways, either from ſituation, or from ſome circumſtances of ſuppoſed conveniency. There are ſome paſtures, from which the milk yields proportionally more butter, others more cheeſe: but there are very few inſtances in which this variation in the nature of the paſture has been found conſiderable; and there is no ſure rule of judging, but experience. It is moſtly fancy which determines the choice,

the profit from the different ways being nearly equal, in general. By averages made up from the reports of the owners of dairies, in different parts of the county, eight Scotch pints of new milk, or the cream taken off it, will produce a pound (or 22 ounces avoirdupois) of butter; 80 pints will, therefore, produce 10 pounds, and after the cream is taken off for the butter, 70 pints will remain for cheese, and this will make a ſtone (22 pounds avoirdupois) of cheeſe, ſaleably dry; about 53 pints of new milk will make a ſtone of cheeſe. The ſtate of the different practices, then, will ſtand thus:

| 80 pints churned. | s. | d. | New milk cheeſe from 80 pints. | s. | d. | Butter and ſkimmed Cheeſe from 80 pints. | s. | d. |
|---|---|---|---|---|---|---|---|---|
| 10lb. of butter, at 8d..... | 6 | 8 | 24lb. at 5d. | 10 | 0 | 10lb. of butter, at 8d..... | 6 | 8 |
| 76 pints of milk, at ¼d. per pint, | 4 | 9 | 60 pints whey, worth 2d. per gallon,..... | 1 | 3 | 1 ſtone cheeſe, | 4 | 8 |
| | | | | | | 6 pints butter milk, at ¼d. per pint,..... | 0 | 4½ |
| | | | | | | 50 pints weak whey, at 1d. per gallon, | 0 | 6½ |
| £. | 0 | 11 5 | £. | 0 | 11 3 | £. | 0 | 12 2¾ |

Two or three pigs are frequently reared on the whey at a dairy, and fattened with potatoes; but the feeding of hogs is not carried to any great extent in this county.

Of two cows, of the ſame ſize, and perhaps from the ſame parents, one often gives a good deal more milk than another, and the milk of one cow is of a richer quality than another: but cows in general give more or leſs milk, and better or worſe, in proportion to the quantity and quality of their food, the regularity with which it is adminiſtered to them, and to the eaſe they enjoy. It has been always obſerved, that two or three cows, kept by themſelves, are

more productive, in proportion, than greater herds, though the few ſhould enjoy no viſible advantage over the many, but perhaps the contrary: which ſeems to ſhow that undiſturbed quiet and minute attention are of great importance. Particular inſtances might be given of cows in this county giving a great deal of milk; but it is not from uncommon inſtances, but general averages, that a juſt idea of a diſtrict can be formed. It is reckoned a moderately good milch cow that gives eight Scots pints a day, and ſuppoſing her whole milk through the ſeaſon to be equal to 150 days at that rate, it will make 150 gallons, which, valuing every 10 gallons at 11s. 3d. the loweſt of the above ſtates, it will make the annual produce of a milch cow, excluſive of the calf, 8l. 8s. 9d. This, however, is far above the average produce of the dairies in this county, which runs from 6l. to 4l. per cow, according to the ſituation; and about one-third more may be added to this and the other money articles, on account of the riſe of price in commodities of the dairy ſince this Report was firſt printed.

Thoſe who keep milch cows give them the beſt paſture in Summer. When the graſs fails, wherever turnips are raiſed, theſe are given, in order to protract the milk ſeaſon. But full feeding with turnips renders the milk nauſeous; and none of the recipes which have been recommended can cure its rankneſs. When cows get plenty of good fodder, and are only partially fed with turnips, the purpoſe of continuing milk is, in a great meaſure, anſwered, and the effects on the flavour of the milk little perceptible. If turnips be waſhed, or if the weather be rainy when they are taken up, the flavour of the milk is the ſtronger. In ſome places potatoes are uſed in place of turnips, for the ſame purpoſe, and are much preferable, producing not only plenty of milk, but of a rich quality and of a good flavour *.

* Though the profits of the dairy are moderate, it ſeems to be very doubtful, if a farmer can make as much of his paſture by any other management. It was a late ſubject of debate, propoſed for the conſideration

Sheep and neat cattle are fattened for the table, both in Summer and Winter. A good deal of incloſed land, not in leaſe, is occupied for this purpoſe, and is either ſtocked by the proprietors, or by jobbers, who rent it by the year. Some farmers employ a part of their incloſed land the ſame way. The ground is ſtocked, either with wedders or ewes with lamb, or with neat cattle, according to the ſuitableneſs of the ground and the fences, and to the opinion of the grazier. Sometimes the beaſts are bought in, about go-harveſt, and wintered upon the ground; ſometimes the paſtures are kept void in Winter and ſtocked after the graſs has got up. In Winter, both ſheep and neat cattle are fattened upon turnips in the upper ward, where the turnip huſbandry prevails moſt. Sheep are either incloſed in nets, and fed upon the turnip ground, or, if it is not dry enough, the turnips are carried to an old paſture field and given them. In this laſt caſe, only three-fourths of the turnips are taken up, and the ſheep are afterwards allowed to ſtroll over the field and gather the remainder, that ſome manure may be left. Neat cattle are fed at the ſtall. Any turnips that are raiſed in the lower parts of the county, are moſtly uſed in feeding neat cattle. Potatoes have been uſed with great ſucceſs in feeding cattle. They are given either raw or boiled. Some think the latter has the quickeſt effect. The ſame root has been found a very frugal and a very hearty food for work horſes.

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of a reſpectable ſociety of practical farmers in this county, whether keeping milch cows, fattening cattle, or fattening ſheep, was the moſt advantageous; and it was decided in favour of milch cows, by a great majority of votes. The principal arguments on this ſide were, that the produce of the dairy was never equal to the demand, and therefore the market leſs fluctuating; that the farmer who kept milch cows had little occaſion to go around the country to markets, and had more leiſure to attend to his farm; that by keeping milch cows, properly fed, attended, and littered, the greateſt quantity of manure, for the improvement of the land, could be made.

## CHAPTER VI.

### GARDENS AND ORCHARDS.

LEAVING ornamental gardening, and thoſe niceties of the art, practiſed to produce the delicate fruits which the want of ſun denies us naturally, it will be ſufficient, for a work of this nature, to mention the gardens cultivated for ſupplying the more ſimple and urgent wants of man. The chief of theſe are the mail gardens around the city of Glaſgow, from which that populous place is ſupplied with all the variety of culinary vegetables produced in this country, at their different ſeaſons; and though the firſt articles do not come ſo early to market as at Edinburgh, where the ſoil is light and dry, as good ſale always ſtimulates the exertions to anſwer it, the growing wealth of Glaſgow provokes the gardeners to make quick advances. So plentiful is the ſupply, that much garden ſtuff, towards the latter end of the year, is ſold at a cheap rate, and carried to the neighbouring villages. Families in the country, and many families in the ſmaller towns, are well ſupplied from their own gardens. And the gardens round the villages in the country, before mentioned, afford great accommodation to the inhabitants, as well as wholeſome and innocent recreation to thoſe of ſedentary employments.

The Clydeſdale orchards lie moſtly between the bottom of the loweſt fall of the river and the mouth of the South Calder. They are chiefly of apple trees, with a mixture of pear ones, and ſome of plumbs. Few of them are large, but many ſmall ones are planted up and down the country. They were ſtated, in the former Report, to amount to 200 acres; but ſome new ones having been lately planted, and ſome more minute information having been ſince received, they may be ſafely ſaid to be upwards of 250 acres. The produce is very precarious, the fruit being frequently deſtroyed in the bloſſom, by Spring froſts and caterpillars. Some years, the whole value has amounted to up-

wards of 2000l. The value of the fruit is not always in proportion to the number and ſize of the trees. Thoſe who cultivate the ground around the trees, taking care not to injure the roots, and giving manure from time to time, have finer fruit, and a much greater quantity, in proportion, than thoſe who do not. Much alſo depends on adapting the trees to the ſoil and expoſure. Though the different kinds of apples, &c. are generally engrafted on the ſame kinds of ſtocks, each aſſumes the habits peculiar to the ſcion. Thoſe who have been attentive in obſerving this, and chooſing the kinds beſt adapted to their ſituation, have found their account in it.

But it ought not to be underſtood that the choice of the ſtock is of no importance. Native crabs are the hardieſt, and prove the moſt durable trees. Codling ſtocks, and thoſe raiſed from the ſeeds of good fruit, generally produce alſo finer fruit; but the trees ſeem to be more ſubject to diſeaſe. Yet diſeaſes are perhaps as often communicated from the ſcion as from the ſtock. But it would take up too much time to ſtate all the phenomena which appear in the orchard. It is ſufficient to ſay, that there are many intelligent people in this county attending to the culture of fruit trees; and it would be of much importance that they were to meet frequently and compare their obſervations; by which, diſcoveries, which are yet wanted, might be made.

The Clydeſdale orchards are moſtly planted on ſteep hanging banks, and have always been found to ſucceed better on ſuch ſituations than on the plain. Apple trees, particularly, ſeem to delight in a ſoil pretty much inclining to clay, eſpecially if it is of a good depth. The pear tree requires the ground to be richer, but rather clayey than open and ſandy. Plumb trees are generally planted round the verge of the orchard, and are profitable, not only for the fruit they bear, but for ſheltering the other trees. All fruit trees require ſhelter, and do beſt when they are emboſomed in woods. The lateſt kinds do not arrive at perfection in backward ſeaſons, and therefore it is always proper to have

a good mixture of Summer and Autumnal fruit along with the Winter's. A juſt proportion of apples, pears, and plumbs, is alſo proper, as one kind ſometimes ſucceeds when another fails. Upon the whole, though the produce of the orchard is precarious, when the original inſignificance of the grounds, on which fruit trees ſucceed, is conſidered, and the ready ſale and high price which the manufacturing towns afford for fruit, an orchard planted with judgment, and carefully cultivated, is certainly a profitable kind of agriculture. Many proper places remain unplanted, probably from a dread of the wanton depredations ſo frequently committed.

Beſides the larger fruit, great quantities of gooſeberries and currants are cultivated, and, when well managed, are ſaid to pay very well.

## CHAPTER VII.

### WOODS AND PLANTATIONS.

THIS chapter may be divided into two ſections; 1*ſt*, The kinds of trees, and extent of plantations; 2*d*, Obſervations on the different kinds of foreſt trees.

#### SECT. 1.—*Kinds of Trees, Extent of Woods and Plantations, &c.*

There are ſcarcely any inſtances of ſpontaneous coppices above the uppermoſt fall of the river. But ſome of the principal landholders, of late, have done much to adorn the country with planting. In the early part of the preſent century, except a few trees about ſome of the houſes, this part of the country was quite naked. There are now about 1800 acres planted, three-fourths of which, at leaſt, has been done in the laſt 20 years. The trees are of various kinds, but the Scots pine and the larix are the moſt prevalent. From the top of the falls downward, coppices ariſe every where, near the ſides of the river and the ſtreams which fall into it. Theſe conſiſt of oak, aſh, birch, elm, alder, holly, gean or wild cherry tree, ſallow of different kinds, &c. intermixed with hazel or other ſhrubs. Of theſe there are 760 acres in the lower part of the upper ward, beſides 580 acres of planted wood, making the whole in this tract 3140 acres. In the middle ward there are 1350 acres of coppice, and 2850 acres of planted wood. There are few coppices in the under ward, perhaps not 40 acres altogether; nor is the planted wood of great extent. Hedge rows and narrow ſtripes ſurround the ſmall incloſures, and give the country a clothed appearance, but probably the ſquare contents do not exceed 700 acres. This makes the whole of the woods in the county 7990; but there is now reaſon to believe there are conſiderably above 8000 acres.

The copſe woods are ſometimes cut once in 25 or 26 years, but are more frequently allowed to grow 30 years;

and an acre is ſold at from 20 l. to 30l. Woods that are extenſive are divided into ſeparate lots, called *hags*, one of which is appointed to be cut annually. Theſe hags are from three to ſeven acres, according to the extent of the wood, and the ſale in the neighbourhood. It has long been the cuſtom to leave 20 or 25 ſelect trees, called *reſerves* or *witters*, in an acre, at each cutting. The intention of this ſeems to have been to furniſh purchaſers with an aſſortment of wood of different ſizes. This practice is ſtill continued, but appears to be an injudicious one. When thoſe trees, drawn up long and ſlender, by the ſhelter of the ſurrounding wood, ſtand in an expoſed ſituation, they are unable to bear the blaſt after they are left ſingle; and if they are not quite ſtunted, make little acquiſition of ſize. Should they happen to thrive, they do more injury to the young growth around them, than all the additional value they attain. An obſerver on this, who ſeems to be a gentleman of good ſenſe and candour, thinks, "that the reſerves are ſo far diſ-"tant from each other, as to cauſe ſlight injury to the ſur-"rounding wood, ſince the lower branches of the former "might be lopped, to give the ſun and air eaſy acceſs to the "latter; and that it would be advantageous to have a ſup-"ply of the various wood and timber which may be required "upon the ſame ſpot." This is, therefore, here ſtated, and the whole left to the judgment of the proprietors of woods.

Formerly there was no kind of trees planted, to any conſiderable extent, but the Scots pine; and there are ſtill more of this kind than any other, it being planted to protect the deciduous kinds. When this is the caſe, it ought to be cut down before the others grow too tall and weak. When it is planted unmixed, it is reckoned the beſt practice to put the plants pretty cloſe together, about 6000 to an acre; ſo that by the ſupport they derive from one another, they may grow up ſtraight and tall, and the tops meeting, may exclude the air, and ſmother the under branches, while they are ſtill ſmall and weak. This is called pruning themſelves, and is found to be the beſt way for preſerving the health of

the trees, and obtaining valuable timber. It is abſolutely neceſſary, that open drains be made through all the hollows, that no water may ſtand. When the general height of the trees is about eight feet, and no living branches on them, but at the top, it is time to begin to weed them; and this ought to be regularly carried on, according to contingent circumſtances, for five or ſix years, till the trees ſtand nearly at ſuch a diſtance as may give them room to grow to uſeful timber; all future weedings being dangerous, not only for opening avenues which may admit too ſtrong a ſtream of air, but on account of the noxious quality which the putrid roots of fir trees, cut down after they have arrived to a conſiderable ſize, ſhow, by frequently killing thoſe which have been left ſtanding. The abundance of coal and peat in this country, renders the firſt profits of planting inconſiderable. In the thinly inhabited parts of the upper ward, where there is little demand for ſmall wood to make fences, &c. the firſt weeding of plantations is a heavy expence. Even wood farther advanced had little ſale, till the erection of the iron works around occaſioned a great demand for ſmall trees, for ſupports in the mines, and for wood of every kind for different purpoſes. In the lower and more populous country, every kind of wood finds ſome market; and valuable timber of late has ſold very high. The Scots pine planted on very poor land, 25 years old, has ſold for 25l. per acre; the ſame when properly thinned, and ſtanding 50 or 60 years, for 80l. and upwards. The prices of different kinds of well grown timber, per cubic foot, were as under:

| | s. | d. | | s. | d. |
|---|---|---|---|---|---|
| Pine, or Fir - - | | 9 | Lime, (Linden) - | 1 | 4 |
| Oak - 1s. 8d. to | 2 | 0 | Poplar (moſtly the white) | 1 | 4 |
| Aſh - 1s. 6d. to | 2 | 0 | Birch - - - | 1 | 0 |
| Elm - - - | 2 | 0 | Holly for veneering, | | |
| Plane (Sicamore) - | 2 | 0 | very rare - | 5 | 0 |
| Beech - - 1s. to | 1 | 6 | Gean tree - - | 1 | 6 |
| Sallow, fit for mill tim- | | | The timber of decayed Pear | | |
| ber - - - | 2 | 6 | and Apple trees, about | 1 | 6 |

The ſtagnation of commerce, which the commencement of the war induced, diminiſhed the ſale, and lowered the prices; but they are now again as high as ever.

SECT. 2.—*Obſervations on the different kinds of Foreſt Trees.*

Important inſtructions, with reſpect to the kinds of trees adapted to the ſoil, bottom, and expoſure, intended to be planted, may be obtained, by obſerving the different degrees of ſucceſs attending thoſe trees in the numerous plantations of this varied county. It may not be improper, therefore, to inſert what occurs in different ſituations, reſpecting the different ſpecies uſually planted.

The Scots Pine, or Fir, as it is uſually called, is not adapted to the greateſt altitudes. It begins to ſhoot in April, and completes its year's growth by the middle of June; ſo that the Winter often continues to reign in the heights, where the ſun is not reflected, till the Summer of the pine be over. Unable to ſtruggle with a repetition of ſuch ſeaſons, it languiſhes and dies. Of all the trees of this kind, planted at Leadhills ſomething more than 30 years ago, and very carefully treated, only two or three remain, in a very ſickly ſtate. On a mooriſh hill in the ſame neighbourhood, there is a plantation, ſtanding a little higher, and the ſoil incomparably worſe. The trees are now about three or four feet high, and have already ceaſed to make farther progreſs. Beſides the great elevation, there is, perhaps, ſomething in the bottom injurious to this plantation. The Scots pine planted in much lower ſituations, upon a dry ſhivery whin rock, the parts of which are ſeparated by duſty fiſſures, ceaſes to vegetate in a few years, though the thin ſoil on the ſurface be good. There is alſo a kind of laminated clay, much diſpoſed to diſſolve with water, not favourable for this, nor any of the pine tribe. It ſucceeds very well, however, in moſt parts of the clay ground in the country, if care be taken to prevent ſtagnant water. It does exeeedingly well on land covering the free ſtone rock: but the beſt timber is produced on hard dry gravelly ſoils.

The Siberian Pine, the Cedar of Lebanon, and ſome others of a ſimilar nature, have been introduced with very little ſucceſs. The ſhort intervals of mild weather, which happen in the beginning of the Spring, excite them to vegetate too early, and the next cold blaſt deſtroys the young buds. The New-England pine thrives, in a tolerable ſoil, from 12 to 20 years, in proportion to the expoſure; after which it generally begins to decay. The longeſt ſtanding, and the largeſt, are on the low grounds near the houſe of Dalziel.

The Spruce is alſo unfit to weather the ſtorm, on the greateſt heights. It ſucceeds on the hard dry rock, where the Scots pine dies; but frequently decays at the end of 18 or 20 years, on ſtiff wet clay. Its moſt favourite ſoil is that which is dry and gravelly.

The Silver Fir thrives in clay ſoils, where the ſpruce fails; nor is it averſe either to the hard rock or gravelly ſoil; but it makes no progreſs on any ſoil that is very poor. Unfortunately it frequently ſuffers ſeverely from the froſty mildews of the Spring, particularly in its youth.

The Larix is now found to be the moſt hardy alpine plant. In moſt places it makes greater progreſs than almoſt any other tree; and there is ſcarcely any ſoil, that is not drowned with water, on which it will not ſucceed. It ſuffers moſt in too luxurious ſituations, where its ſoft ſhoots, unable to keep erect, bend away from the ſlighteſt gale.

The Birch is next to the larix in the progreſs of its growth, and equal to it, in ability, to ſtand the blaſt in alpine ſituations. The birch is ſuperior in the plain. But in whatever ſituation it is placed, it delights moſt in a light ſoil and dry bottom. Notwithſtanding, it thrives in moiſt ſoils, with very moderate draining.

The Aſh, when it enjoys a ſufficient depth of good ſoil, is capable of braving the ſtorm, and puſhing up its head, in the moſt expoſed ſituations; but in a thin ſoil, covering a ſtiff argilaceous bottom, it can make no progreſs. It thrives well, however, in marſhy ſoils, where the banks are ſteep, ſo that the water flows away without ſtagnating. This

is perhaps the moſt important wood in the country, being uſeful in all its ages, and for the moſt purpoſes.

The Mountain Aſh is a hardy native, and has the ſame habits as the aſh.

The Beech comes near to the aſh in capacity of braving the ſtorm, and has much the advantage of it, in thriving in poor or ſtiffer ſoils; but there are ſome barren argilaceous bottoms too much even for the beech.

The Sicamore and Elm require a light ſoil, and a dry open under ſtratum; and when this is the caſe, they thrive in a ſituation pretty much expoſed.

The Oak is leſs patient of the blaſt than moſt of the trees of the foreſt. Being late in putting forth its leaves, it continues to grow till the ſeaſon is far advanced; and the immature wood of its late ſhoots, unable to reſiſt the piercing effects of the cold wind, in expoſed ſituations, withers before the next Spring; ſo that, like Penelope's web, the progreſs of one ſeaſon is undone in the following. The moſt favourable ſituations for the oak, therefore, are hollows or hanging ſlopes, where the ſharp winds are broken by the neighbouring heights. In ſuch ſituations, if ſtagnant water be avoided, it will thrive in the ſtiffeſt ſoils, and with its ſtrong roots penetrate the denſeſt bottoms. This tree, in coppice, is valuable on account of its bark, for the purpoſe of tanning leather. The bark of the mountain aſh and ſallow are uſed for the ſame purpoſe, but are only eſtimated at half the value. The birch bark, of late years, has been uſed for the ſame purpoſe. The oak, though ſlow of growth, has, in ſome ſituations, arrived at a great ſize. Among the oaks of Hamilton park (belonging to the Duke of that name) ſo famous in the laſt age, there were trees which meaſured 27 feet round the trunk, with a wide expanſion of branches.

The Horſe Cheſnut tree thrives well on the lower grounds. The ſweet cheſnut, which quickly becomes a timber tree in diſtricts more northern, does not ſucceed here. Its ſeaſons of growth are too late, or too early for the climate. In

its firſt, it bears ſome reſemblance to the Siberian pine, &c.; in its laſt to the oak; its early growths being almoſt as early as the former, and its latter being nearly as late as thoſe of the latter, and ſtill more ſoft and ſuſceptible of the cold. Hence its ſhoots are alternately put forth and deſtroyed, and it generally becomes a low ſtunted ſhrub. But this does not ſeem to have always been the caſe. There was in the lower part of the pariſh of Cambuſnethan, on the grounds of Mr. Lockhart of Caſtlehill, a tree of this kind, magnificently branched, and of a very large ſize, the ſtump of which ſtill remains living. This ſeems to be a preſumption of the truth of the conjecture advanced in the former part of this Report, that the natural accretion of ſlow moſſes tended to increaſe the inclemency of the neighbouring climate; ſince the annual addition which theſe moſſes viſibly acquire, in a diſtrict where they abound ſo much, may, in the courſe of two or three centuries, come to ſuch an amount as to produce a ſenſible change in the ſtate of the air; while in diſtrict, where the extent of moſs is inconſiderable, ſuch effects do not take place. The fate of the walnut, which may be conſidered as much as a timber tree as a fruit one, is nearly the ſame with that of the ſweet cheſnut.

The Poplar delights moſt in water-formed ſoils, but is averſe to marſh, and, when happily ſituated, makes quicker progreſs than any other tree. This county has been long in poſſeſſion of two kinds of the white poplar, equally ſucceſsful. Diſtinguiſhing them by their habits, they may be called the towering and the branching. The Lombard poplar, which, it has been ſaid, becomes a large tree beſouth the Trent, makes here but poor advances to timber. The balſam poplar makes very great progreſs.

In general, all the ſoils which lie immediately over the free ſtone rock, are much diſpoſed to produce wood, and almoſt all kinds of trees thrive in them. Land lying on a quick declivity, where the water iſſuing from the veins of the earth flows freely away, is very favourable to the growth

of wood. For this reaſon, trees grow better on the dip than on the crop of the mineral ſtrata. Trees, planted by the winds, or by the birds, ſeem to thrive better than thoſe cultivated by man. Whenever they meet on the ſame ground, the advantage which the child of nature has over the child of art, is conſpicuous. There is a kind of coarſe mooriſh ſoil, generally lying upon a thin bed of watery gravel, with an impermeable bottom under it, on which no trees will thrive, till its faults are corrected. While the water below ſtarves the roots, the cloſe accumulation of heath and moſſes on the ſurface deprives them of the benign influence of the ſun and air, and they pine and die in a few years. To raiſe a plantation, in ſuch circumſtances, it is neceſſary not only to give the ground a ſlight draining, but to deſtroy the obſcene growth upon its ſurface.

In concluding this part of the ſubject, it is proper to obſerve, that though woods ſucceed, every other circumſtance being ſimilar, better or worſe in proportion to the elevation in the atmoſphere in which they are placed, yet they ſucceed worſe on the ſummits in low elevations, than they do in much higher ſituations, where there are ſtill greater heights around. The reaſon of this is too obvious to require explanation.

## CHAPTER VIII.

### WASTES, WITH THE POSSIBLE IMPROVEMENTS OF THEM.

THERE is no land in this county over which the right of property is not claimed; but there are ſome high mooriſh grounds, not reckoned capable of any conſiderable improvement, on which the adjoining proprietors have a right of paſturage, according to ſome eſtabliſhed proportion. If we call thoſe lands waſtes which, from the high elevation in which they lie, the poverty of their ſoil, the ruggedneſs of their ſurface, &c., have been conſidered as no farther beneficial to man, than on account of the ſuſtenance which domeſtic animals can collect from them, the extent of waſte land is very conſiderable,—nearly the half of the ſurface. But the waſtes which are more peculiarly the ſubject of a work of this nature, are thoſe enormous maſſes of peat earth lying in a more moderate elevation, and already deſcribed. The extent of theſe diſmal fields, their uſeleſſneſs, and the probability of their injurious effects on the country around, have been ſtated, and a deſpair expreſſed of any extenſive reformation being made upon them. But what is beyond the powers of man, when properly exerted! One of thoſe rare geniuſes, the exertions of whoſe talents are extenſively beneficial to ſociety, has appeared in the adjoining county of Ayr, and put the art of reclaiming ſlow moſſes into a train which may be carried to a vaſt extent, and prove an univerſal benefit to the nation. If, according to the ſentence which a witty author of the laſt age puts into the mouth of his fabulous king of Brobdignag, "He who has "made two ears of corn, or two blades of graſs, to grow on "the ſpot which produced only one before, is a greater man "than all the politicians of the univerſe*;" what gratitude does the public owe to the man who has taught how many ears of corn, and how many blades of graſs, may be

* Gulliver's Travels.

produced on thoſe wide waſtes producing none before? A particular account of the improvements on moſſes comes more properly into the Agriculture Report of the county where they were firſt begun; and indeed the neceſſity of ſuch an account is ſuperſeded, by a letter already in the poſſeſſion of the public, from a gentleman of acknowledged ability, who has taken great pains to inveſtigate and to ſtate the different proceſſes, and the reſult. But as every thing relating to a matter of ſuch national importance ought to be recorded, it may not be amiſs here, leſt it ſhould be omitted otherwiſe, to give ſome account of its origin. About 20 years ago, John Smith, Eſq. of Swinrig-moor, in the pariſh of Dalry, then a youth, ſtung with the deſire of military glory, left his property under the management of adminiſtrators, and went to gather laurels on the plains of America, leaving ſtrong recommendations with his managers and tenants to cultivate ſome pieces of moſs, hard by his houſe, by ſuch means as were then known, in order to take away the unſightly appearance. The peace of 1783 put a ſtop to his military career, and he returned home to look after his private affairs, where he found that his recommendations reſpecting the moſs had been little regarded. On one corner, however, which had been dug over, ſome lime in powder had been careleſsly thrown, and ſome oats ſtrewed. Here he obſerved, that wherever the lime had come, the oats ſprung vigorouſly. Improving the hint thus given, he applied lime to moſs, in various ways, and in different quantities, and by repeated experiments, found that a large doſe of hot lime, applied to the wet ſurface of moſs ground recently dug up, decompoſed the parts with which it came in contact, and rendered a ſubſtance, formerly inert, highly fertile. He afterwards found, that raiſing potatoes the firſt year after liming, ſtill increaſed this fertility, by the ſtagnation of the air under the cover of this broad leafed plant: but to raiſe abundance of potatoes, it was found neceſſary to give the moſs a ſmall quantity of dung alſo. The ability and diligence with which

Mr. Smith has conducted theſe experiments, his ſteady perſeverance, in ſpite of the obloquy and ridicule of a prejudiſed neighbourhood, and the happy iſſue to which he has brought theſe diſcoveries, do him great honour, and ought to place him high in the liſt of thoſe valuable characters, by whoſe uſeful labours mankind have been benefited.

The operations performed in reclaiming moſs, the expence attending them, and the general return obtained, are all accurately ſtated in the above mentioned letter, to which thoſe who are about to improve moſſes are referred. Theſe operations are now begun in different parts of this county, and are conducted moſtly by people not otherwiſe directly engaged in agriculture. It is probable, the novelty of the thing, the proſpect of immediate advantage, and of rendering the ground more valuable in future, may induce others to purchaſe moſs grounds; and follow the ſame example, ſo as to direct the employment of more capital towards the improvement of the country. A few looſe hints, which occurred on a late ſurvey of the reclaimed moſſes in Ayrſhire, ſhall, therefore, be here ſubmitted.

The altitude of theſe moſſes is not conſiderable, perhaps not more than 150, or at the moſt 200 feet above the level of the ſea; but it ſeems evident, that moſs may be cultivated for corn to any altitude in which it ſucceeds on the neighbouring fields; the corn on the moſſes, though much more luxuriant, being nearly as forward as that on the hard ground around them.

Very ſlight draining appears to be ſufficient in the firſt preparation, and levelling is not attended to. The crops were thriving where water was ſtanding within 10 or 12 inches of the ſurface, and equally well on the hillocks and little hollows. The draining can be purſued gradually, as occaſion requires; and levelling can be performed with much more eaſe in the future workings, as the parts of the moſs are more ſeparated by the effects of the lime, labour, &c. The rough manner in which the moſs is firſt turned over, ſeems not only to be ſufficient, but preferable

to a more accurate execution, as more ſurface is expoſed to the action of the lime, and of the weather, during the Winter. For theſe reaſons, it is evident, that, if labourers were plenty, the firſt preparation of moſs might be executed at a very moderate expence.

Lime being the agent by which moſs is converted from an inert to a fertile ſtate, this ſpecies of agriculture can only be advantageouſly purſued where lime can be procured at a moderate rate. The noble Lord, whoſe uſeful reſearches have been mentioned, was convinced, that moſs could be rendered fertile by the application of alkaline ſalts; and he thought theſe could be extracted from ſea water, ſo cheap and ſo plenty, as to be uſed for this purpoſe. Nothing of this kind, however, has yet appeared. The ſeat of the moſs improvements in Ayrſhire, is peculiarly happy, beds both of coal and lime approaching to the ſurface in different places. Lime is, therefore, adminiſtered in large quantities, and the ſucceſs juſtifies the practice. But there is frequently much moſs to reclaim, in places where lime is leſs abundant; and it would be of great importance to know if the purpoſe could be effected by a more ſparing application.

Different ſpots were ſhown on which the lime had been applied in different ſtates; and on thoſe ſpots where it had been applied, when recently ſlaked and ſtill hot and powdery, its effects were by far the moſt conſiderable. Hence it would appear, that the cauſticity of lime, which conſumes the wet vegetable ſubſtances with which it comes in immediate contact, is its moſt important, though, perhaps, not its only effect. Might not, then, a leſs quantity, more accurately ſpread, as the doſe was more ſparing, and the cauſticity heightened by ſlakening it with boiling water, (which, in a coal country, might ſometimes be done with little inconveniency or expence) decompoſe enough of the moſs to make it fertile? In Ayrſhire, after adminiſtering lime largely, a crop of potatoes, and four or five crops of oats, are taken without intermiſſion or recruit. Where lime is ſcarcer, it might be frugal to adminiſter it in ſmall quantities, and

more frequently; for example, a part for the firſt and a part for the third crop: and in this manner, new ſurfaces being expoſed by every turning, it may be preſumed that a leſs quantity of lime would decompoſe more moſs.

Where the lime had not been applied till it had become cool and damp, the crops, though much inferior, were incomparably better than could have been produced without ſome ſuch application: and, conſequently, it may be preſumed, that lime, beſides its corroſive quality, poſſeſſes others tending, in ſome degree, to fertilize moſs. And this, perhaps, is accompliſhed, not only by the calcarious ſubſtance, but by the effect which the particles of ſand and clay, accompanying lime, have in conſolidating the ſurface. To make up for the ſcarcity of lime, therefore, the ſchyſtus, mentioned under the head on manure, might frequently be applied along with it. Proofs of the good effects of this may be ſeen in the pariſh of Eaſt Monkland.

Beſides fertilizing moſs by means of lime, the ſurface, after being in ſome meaſure reduced to mould by the operations, might be carried as a manure to the ſolid grounds around, with great advantage; and thus the fertility of all the fields in the neighbourhood might be increaſed, in a very high degree, without impairing that of the moſſes, which having always plenty of depth, would be as fit for the action of lime as ever; and the ſurface of one acre of moſs would be more than ſufficient manure for ſix acres of firm ground.

But moſſes may be profitable for graſs, as well as for corn fields. It is repreſented in the letter above mentioned, that after the culture of corn is abandoned, on account of the ſuperabundance of eſculent graſſes which ſpring up amongſt it, by the addition of rye graſs ſeed along with the laſt corn crop, a plentiful crop of hay, for the firſt year, is produced, and the paſture for ſucceeding years is worth 25 s. per acre. The truth of this ſtatement is not at all queſtioned; but it is evident, that none of the fields of moſs, which have been cultivated for corn, and are now in graſs, are brought to the beſt poſſible ſtate for graſs grounds; and there is a probability, that a little more attention to the culture of graſs might

be accompanied with ſucceſs. It is probable, alſo, that a cloſe cover of eſculent graſs would greatly facilitate the operation of any new application of lime, to increaſe ſtill farther the fertility of moſſy ground; the reſidue of ſuch herbage on the ſurface, and its living roots ſpread through the ſoil, being much more ſuſceptible of the putrid fermentation, than the dead plants of which the ſoil is originally compoſed.

Although complete draining at the firſt, while the great clods ſtill adhere, and might wither too much in the Summer's drought, freely admitted into the interſtices between them, be neither neceſſary nor proper, it ſhould certainly be purſued as the decompoſition of the moſſy ſubſtance takes place, that by the time the ſurface becomes fit to retain a ſufficient quantity of the falling moiſture, it may be freed from the injury of the ſurplus ſtagnating in it. There ſeems to be a want of this complete draining in the late improved moſſes which are now in graſs. The turf, though thick in ſome places, is not regular; nor does the herbage appear to be very palatable to cattle. More accurate draining, and condenſing the ſurface by repeated rollings, and ſpreading argilaceous ſubſtances upon it, would certainly improve the turf. If the drains were covered ones, and the ſurface well levelled, wherever ſprings on higher grounds were at command, there is, perhaps, no caſe in which watering, ſo much recommended of late, could be more eaſily and ſucceſsfully practiſed.

But it would be neceſſary that theſe grounds were alſo repleniſhed with the moſt proper graſſes. The graſſes of the culmiferous kinds, obſerved on them, were chiefly the graſs called *poa purpurea*, and the ſoft millet graſs (*holcus lanatus*). Neither of theſe are much reliſhed by cattle, or believed to be of the moſt nouriſhing quality, though eaten occaſionally. The foxtail, (*alopecurus arvenſis et pratenſis*) the ſweet ſcented early meadow graſs, (*anthoxanthum*) and the *poa pratenſis*, would make a valuable addition. They are our beſt native graſſes, and being all frequent, there would be no difficulty of gathering their ſeeds, and propagating them to any neceſſary extent. White clover appears in

ſome place, which indicates that it may be farther propagated by ſowing its ſeeds. The daiſy, ſilverweed, crowfoot, &c. make up the liſt of the moſs herbage, the place of all which would be much better ſupplied by the cow graſs of the Engliſh farmers, *(trifolium pratenſe)* the ſtringy roots of which enables it to take a faſt hold of the ſoil. It is believed, that improved moſs thus drained, condenſed, and ſtored with proper herbage, would be inferior to no other ſoil in the production of graſs.

There is much moſſy ground in this county, of too great elevation to encourage the cultivation of it for corn; yet its ſituation and circumſtances are ſuch, that, probably, lime might be applied to it with great advantage. It will be ſufficient to give one inſtance, which will apply in all ſimilar caſes. Through the pariſhes of Leſmahagow, Douglas, and Crawfordjohn, there is a tract containing vaſt beds of excellent lime ſtone. Among the wild ſheep paſtures of the ſame country, there are large fields, the general ſurface of which is tolerably regular, and the acclivities very moderate, and at the ſame time the bottom not very ſoft or miry; but being always drenched with the ſtagnant water retained on the ſurface, bear only herbage of the coarſeſt quality, furniſhing neither plentiful nor nouriſhing paſture. In the wide ſheep paſtures on the S. E. corner of Scotland, and thoſe of England immediately bordering with it, where all the branches of the buſineſs of ſhepherdiſm are well underſtood, and diligently purſued, the active and intelligent occupants of ſheep farms have, for ſome time, been in the cuſtom of drawing ſmall drains through all the moiſt parts of their paſtures, to lead away the ſuperfluous water which ariſes from ſprings, or deſcends from the hills in rains; and the general opinion is, that great benefit is derived from this practice. Were the ſame followed with the fields in queſtion, and hot lime ſpread upon them, the coarſe herbage would be conſumed, and white clover and other ſweet graſſes ſoon appear in its room, which would probably render one acre of this paſture more valuable than ſix in its preſent ſtate.

## CHAPTER IX.

### LIVE STOCK.

#### SECT. I.—*Cattle.*

THE number of oxen kept in this county is inconſiderable. Excluſive of thoſe which are caſually brought in, to fatten on the Summer's paſtures, or on turnip, the whole, perhaps, does not exceed 200. Milch cows, and young females rearing to ſupply them, are the principal ſtock. The whole may amount nearly to 30,000.

The neat cattle of this county are a mixture of many breeds, very different in figure, ſize, and proportions; many of them, perhaps, very ill adapted to the nature of the country. So far as attention has been paid to breeding, milk rather than beef ſeems to have been the object; and this object, perhaps, has not always been purſued with the greateſt judgment. There are, however, exceptions to this ſtricture. Experience has ſhown, that cows of a bulky carcaſe are fit only for rich paſture, firm ground, and a ſheltered ſituation. Thoſe of a ſmaller ſize paſs more eaſily over a ſoft ſoil,—are more active in collecting their food, on meagre paſtures;—and, as they require proportionally leſs food,—have as many teeth, and jaws fully more nimble,—have leſs trouble in ruminating the neceſſary quantity of dry fodder, and keep themſelves in good habit at all times. Hence it is, perhaps, that ſmall cows, though they give leſs milk at a time, generally give it of a richer quality, and for a longer continuance, than large ones. Upon theſe principles, handſome cows, weighing from three to four hundred weight the four quarters, when fat, are bred in different parts of the county; and more attention has been paid, of late, to obtain the deſired appearance. The colour is moſtly brown, with ſpots of white, the hair thick ſet, ſoft, and ſleek, the head and neck lean and ſlender, the ears ſmall and neat, the

limbs ſhort, ſmall and clean boned, the cheſt rather round than deep at the heart, the ſhoulders, and more eſpecially the loins, broad and ſquare, the back, from the ſhoulder to the deſcent of the rump, quite ſtraight, the tail long and ſmall. Some aim at having cows without horns; but when there are horns, they are ſmall at the root, not long, and pretty erect.

This valuable breed of cattle are in greater perfection in the northern diſtrict of Ayrſhire, and the neighbouring county of Renfrew; and it is probably from thence they are derived; numbers of young cows, from theſe quarters, being brought for ſale to the fairs of Rutherglen.

### SECT. 2.—*Sheep.*

In all the lower parts of the county, incloſing has, in a great meaſure, baniſhed ſheep; and that kind, of which the little flocks on the low ground was formerly compoſed, is now loſt. Whether this is a diſadvantage or not, it is impoſſible now to determine. Where incloſures are made defenſible, it is not uncommon to feed ſheep, bought in from breeding diſtricts. Theſe are either ewes and lambs, or wedders, moſtly the former; but it is difficult to make a computation of the numbers which are ſo fattened annually. A few tame ſheep are ſtill kept on ſome of the low grounds, moſtly mixtures of the Diſhly breed, leſs or more degenerated. But the buſineſs of ſheep paſturing is chiefly exerciſed in the wild and mountainous parts. The ſheep are of that kind, diſtinguiſhed by ſhepherds under the name of the ſhort moor ſheep. They are ſo well known, that any attempt to deſcribe them would be ſuperfluous. Long experience has ſhown that this animal is well adapted to the ſituation in which it is found: but it has been much regretted, that ſo little benefit is derived from the fleece as a material of manufacture. Great hope was entertained that the patriotic exertions of the Britiſh Wool Society would have made conſiderable improvements in this reſpect. But a number of obſtacles ſtand in the way which cannot be

eaſily ſurmounted. A few of theſe, ſet forth by ſome of the moſt intelligent ſheep farmers in this county, ſhall here be ſtated. *1ſt*, The decided preference which the Yorkſhire jobbers (the principal purchaſers of ſurplus ſtock) give to ſhort ſheep, chooſing even the rougheſt wooled, and buying them at a higher price than thoſe of equal ſize with a finer fleece. Thus what is loſt in the value of the wool is gained in the ſale of the ſtock; and ſhepherds are tempted to degrade rather than ameliorate the wool, by introducing rams of the coarſeſt fleece to the breeding ewes. *2dly*, The demand for coarſe wool is greater than for fine; and when the market is dull, the ſale of the former is readieſt. From this ſtate of the wool market, it is more the intereſt of ſheep farmers to increaſe the quantity, than to improve the quality of wool. *3dly*, Sheep always thrive beſt on the ground on which they have been bred perhaps for ſome generations: and, therefore, it is thought imprudent to diſmiſs a known flock, and bring in a new one; experience having ſhown, that immediate diſadvantages frequently attend ſuch a ſtep; whereas the advantages are more uncertain and remote.

This uſeful animal is ſubject to various diſeaſes, the moſt fatal of which are the rot and the braxy. Scarcely any effectual remedy has been found for either. A very intelligent ſheep farmer ſtrews the branches of the Scots pine on the paſtures of the ſheep of the firſt year, (to which the latter diſeaſe is chiefly incident) upon which they browſe; and he has found this a conſiderable preventive of the diſeaſe. If the regular ſtudy of the veterinary art were more common, the practice of medicine among domeſtic animals, whoſe manner of life is more ſimple and natural than that of man, might perhaps be more eaſy and ſucceſsful. At leaſt it ſeems worthy of public attention, to make fair experiments, in order to diſcover if any better means can be found for ſaving the lives of this and other uſeful animals, than the quack noſtrums of ignorant and ſuperſtitious people.

The number of the ſtanding ſtock of ſheep in the whole county is about 120,000.

SECT. 3.—*Horſes, their uſe in Huſbandry compared to Oxen.*

There are a great number of horſes, of the draught kind, bred in this county. The number employed in agriculture, with the young ones rearing on the different farms, amount altogether to about 8000. The number of thoſe kept for pleaſure, for travelling, for the carriage of goods, &c. is not aſcertained, but is certainly very conſiderable.

The draught horſes of Clydeſdale have long been in high eſtimation, and are ſo well known, that a deſcription of them would be unneceſſary. Dealers from different parts of England come to the Glaſgow and Rutherglen markets to purchaſe them, and prefer them to the Derbyſhire blacks. Thoſe of the upper ward, where the greateſt number are bred, are eſteemed the beſt. They have been ſold, of late, in the Lanark and Carnwath markets, at three years old, from 20 l. to 30 l. and upwards. They have been much improved of late, and are ſtill improving, eſpecially in ſize and weight.

Formerly oxen were uſed in tillage, in different parts of this county; but when the progreſs of civilization demanded better roads, and better roads were, of courſe, obtained, huſbandmen began to make more frequent uſe of carriages, and to greater diſtances. From the firſt origin of carriages in the county, there ſeems to have been a predilection for the ſingle horſe cart, the propriety of which has been juſtified by more experience. In conſequence of this, the horſe, which was not only the moſt ductile and expeditious animal, but whoſe hoofs were beſt adapted to receive an armature fit to defend them againſt the injuries of rough roads, obtained a general preference. The farms being ſmall, one ſet of animals for home, and another for diſtant work, could not be kept; and thus the ox, being the leaſt generally uſeful, has been gradually dropped. The uſe of oxen in the plough is not yet entirely abandoned. Along the

eaſtern border of the county, they are ſtill employed in that draught. But as a pair of oxen are joined in the ſame plough with four horſes, to do what the horſes might very well perform without them, the oxen ſeem to be little better than an uſeleſs incumbrance. What a pity that thoſe uſeful animals ſhould be either abandoned, or ſo unprofitably employed!

Some gentlemen have again begun to uſe oxen for all the purpoſes of draught. The Right Honourable Lord Douglas always works a few; and, at his Lordſhip's deſire, his manager communicated the following comparative ſtatement of the importance of the horſe and the ox in labour, at the time the former Report was printed; and though the money value of both animals is different from what it then was, it ſhall here be ſtated in the ſame terms.

An ox at the price of 7 l. 10s. is equally ſtrong in draught with a horſe at 20 l., and equally fit for the plough, cart, or harrow.

The ox requires one-fourth leſs fodder than the horſe, and only a little unthreſhed oats, from an eighth to a ſixth of what is requiſite to ſupport the horſe; and if 14 pounds of raw potatoes be given to the ox in a day, he will need no oats, and not conſume more than half the fodder eat by the horſe.

The ox may be wrought from four to ten years of age, and ſtill increaſe in ſize, and be capable of carrying more fleſh, when he is turned to fatten; whereas the horſe, in that time, will loſe one-fifth of his price.

The ox may be turned to paſture in Summer, as ſoon as he is taken from the yoke; and will gather his own food, without needing any corn or attendance.

The ox is as much fatigued with ſeven hours work in the day, as the horſe is with eight; and the execution of the ox is ſcarcely more than four-fifths of that of the horſe, in the ſame time.

After the ox has filled his belly, he muſt have time to ruminate, and therefore cannot be baited, and put to work a

ſecond time the ſame day, like the horſe, without being greatly injured.

From this view of the matter, it ſeems evident, that oxen could not be advantageouſly put to all the purpoſes of labour now done by horſes; but, at the ſame time, there might be a great ſaving made by uſing them in part. To give one ſhort example, for the ſake of illuſtration; On a farm where there was frequent occaſion to plough ſtubborn land with a deep furrow, a pair of oxen might be very properly joined to a pair of horſes in one plough, for that purpoſe. When leſs ſtrength of draught was requiſite, the horſes and oxen might be wrought ſeparately; or in any caſe where diſtant carriages were neceſſary, when a longer continuance at work was required than was ſuitable to the nature of oxen, or the ſtate of the roads unfavourable for their feet, the horſes might be employed in ſuch, while the oxen were forwarding the work at home. The ſaving which would accrue from the difference of the firſt coſt of oxen and horſes, the difference of the expence of maintenance, &c. of the two animals, avoiding the fall of price by the ſale of horſes, and the total loſs of them by incurable lameneſs, &c. is left to the calculation of the reader, and will appear ſo conſiderable, that it is probable the partial uſe of oxen needs only to be fairly introduced to become general: and thus the ox would be reſtored to his real importance, and be found no leſs valuable as a labouring than as a feeding animal.

### SECT. 4.—*Inferior Stock.*

Beſides the kinds of live ſtock above enumerated, ſcarcely any other can be ſaid to be an object of attention among the huſbandmen of this county. A kind of Jewiſh abhorrence of ſwine ſeems to have taken place, about the rigid times of the Reformation, in the weſtern counties of Scotland. They were unclean beaſts,—it was ſinful to eat their fleſh,—and neither creditable nor profitable to keep them. And though theſe prejudices are now pretty much worn out, pork is not yet, in general, a favourite food, and, of

courſe, the numbers of hogs kept and fed are not conſiderable. Country gentlemen frequently keep a ſmall piggery to ſerve their own tables; and ſome few pigs are bought in by farmers, in different parts of the county, to conſume the whey of the dairy in Summer, and are fed upon potatoes, &c. in Autumn. To ſerve this demand, ſome people find their account in keeping brood ſwine. But whey is now much uſed in printfields, as an acid, and the farmers in the neighbourhood of Glaſgow ſell their whey there for that purpoſe.

There is no rabbit warren in the county, but one belonging to his Grace the Duke of Hamilton; and from a ſingle inſtance in a great tract of country, and ſubject to the inroads of every kind of depredatory vermin bred in the neighbourhood, no fair inference of the value of warrens can be drawn. But it may be ſaid, that rabbit warrens, and the cultivation of a country for corn, ſeem to be ſomewhat incompatible.

Geeſe and turkeys are bred moſtly by people of fortune, for the ſake of variety at their tables.

Dunghill fowls, and ſometimes ducks, are found in all the farm yards of the county. The former, particularly, are equally inimical to the kitchen garden and the corn field, both in Spring and Autumn; and for that reaſon are commonly the deteſtation of huſbandmen, who think the injuries they do at theſe times are greater than all the value they yield through the year. The houſewife, however, reckons moſt on the profit and conveniency of fowls and eggs, which of late have ſold very high; and under this favour they are ſheltered and preſerved. A fowl has a great appetite, and if it received all its food from the hand, would ſoon conſume its own value; but as they pick up much of what would otherwiſe be loſt, and make an agreeable variety at the table, they are a conveniency, the want of which would be much felt. But the profit ariſing from keeping them cannot, upon the whole, be conſiderable.

Pigeons are conſidered by huſbandmen as a nuiſance, and

## CHAPTER X.

### RURAL ECONOMY.

THE title of this chapter, taken in its large ſenſe, may be underſtood to comprehend the conduct of the huſbandman in the courſe of his buſineſs, through all the varied ſeaſons of the year. But as it has been the chief buſineſs of this work, after giving ſome deſcription of the face of the county, to repreſent what was doing in the cultivation of it, it is preſumed the ſubject is pretty much exhauſted. However, ſuch gleanings as remain ſhall be here collected; and theſe will eaſily compriſe any miſcellaneous topics relating to agriculture, and anticipate the purpoſe of a chapter of that kind. This chapter will therefore contain the following ſections; viz.

1*ſt*, Agricultural ſocieties, ſhowing the means followed by huſbandmen for their mutual inſtruction and ſupport.

2*d*, The weights and meaſures uſed for aſcertaining the quantum of things relating to a farm.

3*d*, The prices of the different commodities produced from farms.

4*th*, The labourers employed in agriculture,—hours of labour,—price, &c.

5*th*, Their accommodation, ſuch as food and fuel.

#### SECT. 1.—*Agricultural Societies.*

Huſbandmen, as a claſs of men, are leſs connected than any other of which the general maſs of ſociety is compoſed. There is no bond of union to conjoin them for the general intereſt of their order—no rallying point around which they can aſſemble for their mutual ſupport: conſequently, inſulated huſbandmen can never match in conteſt with the members of any other claſs of ſociety. This aſſertion will be derided by ſuperficial obſervers; but, it is preſumed, will ſcarcely be refuſed by any perſon of candour, who ſoberly conſiders the matter. It may be attributed, in part, to their

diſperſed ſituation, and ſequeſtered manner of life, but ſtill more to the unjuſt prejudices, which have long and ſtrongly obtained among the other claſſes, and the laws and cuſtoms founded on theſe prejudices, tending to depreſs and diſcourage them; and not to any contracted ſelfiſhneſs of diſpoſition attached to the profeſſion. On the contrary, we find no claſs of men ſo liberally diſpoſed to aſſiſt one another in forwarding their mutual labours, or in relief of the emergencies which occur to an individual; and none ſo free in communicating ſuch knowledge as they poſſeſs, for the benefit of their brethren.

For ſuch purpoſes, ſeveral ſocieties have been inſtituted in different pariſhes or other diſtricts of this county. Some are of a conſiderable ſtanding, and ſome more recently formed. The members of theſe meet at an agreed place, perhaps once a month, where they converſe about the operations in agriculture, in which they have been employed, and the ſucceſs attending them. A ſubject of diſcuſſion is alſo propoſed at one meeting; and the members take it into conſideration, and deliver their opinions at the ſubſequent one. There are inſtances of members of ſome of theſe ſocieties attending the lectures on agriculture given by Dr. Coventry at Edinburgh, as well for the inſtruction of their ſociety as for their own. They ſpeak highly in praiſe of this gentleman's labours.

Some of theſe agricultural ſocieties have ſtill another object. A ſtock purſe is formed by ſtated contributions paid by all the members, out of which ſome relief is given to perſons, connected with the ſociety, who may fall into accidental diſtreſs.

A correſponding agricultural ſociety has been lately eſtabliſhed at Glaſgow, upon a large ſcale. The members already admitted amount to ſeveral hundreds, and are ſtill increaſing. Each member, upon his admiſſion, contributes a guinea to the common ſtock. The ſociety, at their general meetings, are to elect certain annual office-bearers, and appoint a committee to aſſiſt them. Theſe are to keep up a

correſpondence with the leſſer ſocieties around, receive ſuch communications as they may ſend, and return copies of ſuch as are received from other quarters, &c. The ſtock is to be lent out on intereſt, only to huſbandmen who are members of the ſociety.

### SECT. 2.—*Weights and Meaſures.*

The Dutch and Trone weight, the only kinds uſed in rural commerce, in this county, are deſcribed in the Mid-Lothian Report. The proportion they bear to avoirdupois weight, is the ſame in this as in that county. Meal only is ſold by the former; butter, cheeſe, wool, flax, butchers meat, and hay, by the latter.

Eight lib. make a peck, 16 pecks a boll of meal; 16 lib. of butter, cheeſe, flax, wool, and hay, make a ſtone, 12 ſtone of wool a pack. Though there is a clauſe almoſt in all leaſes, to reſtrain the farmer from diſpoſing or carrying off fodder from the farm, hay, being rather a new product, is not underſtood, and there is always a great deal of hay ſold by farmers. Five ſtone of hay is nearly equal to a hundred weight, and conſequently 100 ſtones near a ton. Though common farmers are not allowed to ſell ſtraw, there is always much ſtraw bought and ſold; and the moſt accurate way of aſcertaining its value, which is now frequently reſorted to, is to weigh it as hay.

It would be by far the moſt juſt and accurate way of aſcertaining the value of grain of all kinds, to weigh it, and ſhould certainly be uſed in all caſes.

Lineal, ſquare, and liquid meaſure, are the ſame here as deſcribed in the Mid-Lothian Report.

In the dry meaſure, uſed in the ſale of grain of all kinds, a boll contains four firlots, a firlot four pecks, and a peck four forpets or lippies; 16 bolls make a chalder. The firlot uſed to meaſure barley and oats, is almoſt one half larger than the firlot for meaſuring wheat, beans, peaſe, &c. Both theſe meaſures are about one-ſixteenth larger than the Linlithgow ſtandards of the ſame denominations. But for

more than 30 years paſt, wheat has been bought and ſold by the Linlithgow ſtandard, which is now attempted to be introduced for other grains.

In the lower parts of the county potatoes have been meaſured, for theſe 40 years, with a diſh of the ſhape of a caſk, the peck meaſure holding 15 Scots pints; its full of potatoes, recently dug, weighs 43 lib. avoirdupois. In the higher parts of the county potatoes are ſold by the barley meaſure.

The peck, or fleek, for meaſuring pears and apples, holds about 18 pints. The confuſion occaſioned by the irregularity of weights and meaſures, is too obvious to require any comment.

SECT. 3.—*Prices of the Commodities produced from Farms.*

The commodities derived from farms are either the materials of manufacture, or proviſions for man and ſubſervient animals. Both theſe are either obtained directly by means of cultivation, or indirectly from the animals ſupported on farms. The money price of proviſions, of the firſt kind, have not riſen in proportion to the articles which enter into the coſt of raiſing them; and indeed the price of the former ſeems ſcarcely to have been affected by the riſe of the latter, but fluctuated only on account of temporary ſtarts of ſcarcity or plenty. In the courſe of the laſt 40 years, land rent, the wages of labour, the price of labouring horſes, &c. is nearly tripled, but the price of grain has ſeldom been much lower during that period, than in the beginning of the preſent Summer, 1797. On the other hand, the laſt kind of proviſions, which require leſs additional coſt of labour, has been regularly upon the riſe, and the price is tripled, and in ſome inſtances quadrupled, in the above period. The current prices of the materials of manufacture ſeem more to reſemble thoſe of the firſt than of the laſt kind of proviſions.

Price of Moorland wool, from 6s. to 8s. per ſtone.

Flax, from 10s. 6d. to 1 l. per ditto.

Butter, from 16s. to 1 l. per ditto.

Price of New milk cheeſe, from 8s. to 9s. per ditto.
Skimmed milk ditto, from 6s. to 6s. 6d. per ditto.
Butcher meat of all kinds, from 7d. to 10d. per lib.
Fowls, from 2s. 6d. to 3s. per pair.
Eggs, from 6d. to 1s. per dozen.
Hay, from 5d. to 8d. per ſtone.
Straw ſells at from one-half to two-thirds the price of hay.

The above are nearly the prices at which different articles have ſold in the lower part of the county, during the laſt twelve months.

The following table of fiars, or medium prices, will give the beſt idea of the price of grain. It contains only the prices of oat-meal and barley. The price of a boll of wheat may be computed to be nearly equal to that of a boll and an half of oat-meal. There are four different offices in the county, at which proof of the prices are annually taken; viz. the commiſſary's of Glaſgow, the univerſity's, the commiſſary's of Hamilton and Campſy, and the commiſſary's of Lanark.

# TABLE,

*Years of the Commissariot of Hamilton and Campsy, for Oat-Meal and Barley, for the following 60 Years, in four Periods of 15 Years each.*

| 1st Period. | Meal. | | | Barley. | | |
|---|---|---|---|---|---|---|
| | L. | s. | d. | L. | s. | d. |
| 1752 | 0 | 10 | 0 | 0 | 8 | $11\frac{6}{12}$ |
| 1753 | 0 | 10 | 0 | 0 | 9 | $7\frac{10}{12}$ |
| 1754 | 0 | 12 | $6\frac{8}{12}$ | 0 | 12 | 9 |
| 1755 | 1 | 0 | 0 | 0 | 17 | 11 |
| 1756 | 0 | 9 | 8 | 0 | 9 | $8\frac{2}{12}$ |
| 1757 | 0 | 8 | 4 | 0 | 8 | $7\frac{2}{12}$ |
| 1758 | 0 | 7 | 0 | 0 | 7 | $6\frac{6}{12}$ |
| 1759 | 0 | 10 | 5 | 0 | 9 | 11 |
| 1760 | 0 | 16 | $2\frac{2}{12}$ | 0 | 15 | $3\frac{3}{12}$ |
| 1761 | 0 | 11 | 0 | 0 | 11 | $1\frac{0}{12}$ |
| 1762 | 0 | 9 | 0 | 0 | 9 | 5 |
| 1763 | 0 | 10 | 0 | 0 | 10 | $8\frac{6}{12}$ |
| 1764 | 0 | 10 | $6\frac{8}{12}$ | 0 | 9 | $0\frac{4}{12}$ |
| 1765 | 0 | 11 | 8 | 0 | 10 | $7\frac{4}{12}$ |
| 1766 | 0 | 15 | $1\frac{6}{12}$ | 0 | 13 | $4\frac{6}{12}$ |
| | L. 8 | 11 | 6 | L. 8 | 4 | $6\frac{10}{12}$ |
| Aver. of 1st period | L. 0 | 11 | $5\frac{3}{12}$ | L. 0 | 10 | $11\frac{7}{12}$ |

| 2d Period. | Meal. | | | Barley. | | |
|---|---|---|---|---|---|---|
| | L. | s. | d. | L. | s. | d. |
| 1752 | 0 | 14 | $5\frac{4}{12}$ | 0 | 13 | $8\frac{3}{12}$ |
| 1753 | 0 | 13 | 8 | 0 | 13 | 2 |
| 1754 | 0 | 11 | 0 | 0 | 9 | $6\frac{11}{12}$ |
| 1755 | 0 | 15 | $10\frac{8}{12}$ | 0 | 12 | $1\frac{6}{12}$ |
| 1756 | 0 | 18 | 11 | 0 | 17 | 2 |
| 1757 | 0 | 15 | 0 | 0 | 13 | $8\frac{9}{12}$ |
| 1758 | 0 | 10 | 0 | 0 | 8 | $6\frac{8}{12}$ |
| 1759 | 0 | 9 | 8 | 0 | 9 | $8\frac{5}{12}$ |
| 1760 | 0 | 10 | 4 | 0 | 9 | $7\frac{7}{12}$ |
| 1761 | 0 | 12 | 0 | 0 | 10 | $6\frac{8}{12}$ |
| 1762 | 0 | 17 | 4 | 0 | 13 | $11\frac{8}{12}$ |
| 1763 | 0 | 13 | 0 | 0 | 14 | $4\frac{6}{12}$ |
| 1764 | 0 | 15 | 4 | 0 | 13 | $10\frac{4}{12}$ |
| 1765 | 0 | 18 | 0 | 0 | 18 | $3\frac{4}{12}$ |
| 1766 | 0 | 18 | 0 | 0 | 19 | $9\frac{8}{12}$ |
| | L. 10 | 10 | 7 | L. 9 | 18 | $2\frac{1}{12}$ |
| Aver. of 2d period | L. 0 | 14 | $0\frac{5}{12}$ | L. 0 | 13 | $2\frac{6}{12}$ |

| 3d Period. | Meal. | | | Barley. | | |
|---|---|---|---|---|---|---|
| | L. | s. | d. | L. | s. | d. |
| 1767 | 0 | 16 | 0 | 0 | 15 | $0\frac{6}{12}$ |
| 1768 | 0 | 13 | 8 | 0 | 12 | $2\frac{4}{12}$ |
| 1769 | 0 | 15 | $9\frac{4}{12}$ | 0 | 15 | $4\frac{2}{12}$ |
| 1770 | 0 | 15 | 8 | 0 | 15 | $6\frac{5}{12}$ |
| 1771 | 0 | 15 | $10\frac{4}{12}$ | 0 | 16 | 4 |
| 1772 | 0 | 17 | $9\frac{4}{12}$ | 0 | 17 | $1\frac{11}{12}$ |
| 1773 | 0 | 17 | 0 | 0 | 16 | $11\frac{8}{12}$ |
| 1774 | 0 | 15 | 4 | 0 | 16 | $3\frac{6}{12}$ |
| 1775 | 0 | 13 | 0 | 0 | 13 | $9\frac{6}{12}$ |
| 1776 | 0 | 14 | 0 | 0 | 12 | 0 |
| 1777 | 0 | 14 | 4 | 0 | 12 | 2 |
| 1778 | 0 | 14 | 8 | 0 | 12 | 4 |
| 1779 | 0 | 12 | 4 | 0 | 10 | 8 |
| 1780 | 0 | 15 | 4 | 0 | 11 | $11\frac{4}{12}$ |
| 1781 | 0 | 14 | 0 | 0 | 12 | $8\frac{0}{12}$ |
| | L. 11 | 4 | $8\frac{10}{12}$ | L. 10 | 10 | 6 |
| Aver. of 3d period | L. 0 | 14 | $11\frac{9}{12}$ | L. 0 | 14 | $0\frac{4}{12}$ |

| 4th Period. | Meal. | | | Barley. | | |
|---|---|---|---|---|---|---|
| | L. | s. | d. | L. | s. | d. |
| 1782 | 1 | 1 | 4 | 1 | 1 | 0 |
| 1783 | 0 | 16 | 8 | 0 | 15 | 0 |
| 1784 | 0 | 16 | 0 | 0 | 14 | 8 |
| 1785 | 0 | 13 | 8 | 0 | 11 | 9 |
| 1786 | 0 | 15 | $3\frac{4}{12}$ | 0 | 11 | 4 |
| 1787 | 0 | 15 | 10 | 0 | 12 | 1 |
| 1788 | 0 | 13 | 9 | 0 | 12 | 6 |
| 1789 | 0 | 14 | 6 | 0 | 14 | $5\frac{6}{12}$ |
| 1790 | 0 | 16 | 6 | 0 | 12 | 8 |
| 1791 | 0 | 16 | 0 | 0 | 15 | 0 |
| 1792 | 0 | 17 | 5 | 0 | 17 | $4\frac{6}{12}$ |
| 1793 | 0 | 17 | 6 | 0 | 15 | $4\frac{9}{12}$ |
| 1794 | 0 | 17 | $0\frac{4}{12}$ | 1 | 0 | $9\frac{4}{12}$ |
| 1795 | 1 | 1 | 1 | 1 | 3 | 3 |
| 1796 | 0 | 16 | 7 | 0 | 18 | $11\frac{4}{12}$ |
| | L. 12 | 9 | $1\frac{8}{12}$ | L. 11 | 16 | $2\frac{5}{12}$ |
| Aver. of 4th period (in which there have been two years of remarkable dearth.) | L. 0 | 16 | $7\frac{3}{12}$ | L. 0 | 15 | $8\frac{10}{12}$ |

SECT. 4.—*Labourers employed in Agriculture,—Hours of Labour,—Price, &c.*

It has been already ſaid, that the greateſt part of agricultural labour is performed by ſervants hired by the half year, and living in the farm houſes. In many parts of the county, the women ſervants work along with the men, at almoſt all kinds of out-work. But as more hands than ordinary are needed for cutting down the corns in harveſt, many huſbandmen, to ſecure a fixed number for that purpoſe, when they can be got, contract with villagers to aſſiſt during the time of reaping. All theſe labourers have no fixed hours, but continue their labours while light and weather admit, and circumſtances require. The poor girls, when light is gone, and the men ſat down by the fire, reſume their houſehold labours.

The wages of men ſervants, beſides bed, board, and waſhing, is from 13 l. to 16 l. per annum; of a maid ſervant, from 5 l. to 7 l.; of a harveſt man for the reaping ſeaſon, perhaps four weeks, beſides food, 1 l. 16s.; of a harveſt woman for the ſame period, 1 l. 10s. Labourers, both men and women, are ſometimes hired in by the day, particularly in the times of planting, ſowing, and hoeing turnips and potatoes, hay making, and harveſt, when a fixed number are not provided. Theſe work only 10 hours in the day, beginning at ſix in the morning and ſtopping at ſix at night, and taking an hour to reſt at breakfaſt, and another at dinner. Hired labourers, in Winter, take breakfaſt before they go out in the morning, make a ſhort pauſe to eat a little at mid-day, and quit when light fails in the evening. All labourers have improved in dexterity and execution, but have loſt much of the conſcientious anxiety to forward the work in hand, which formerly appeared; and having too much of the diſpoſition of the hireling who longs for the going down of the ſun, it is doubtful if they do more work than formerly. Day labourers moſtly provide their own food.

A labouring man's wages, at ordinary work, is from 1s. 4d. to 1s. 6d. a day; a woman's, 9d.; a mower, 2s. 6d.; a harveſt man, 2s.; a harveſt woman, 1s. 6d.

Work by the piece is too often deficiently executed, when opportunities of ſlighting offer. When this can be avoided, it is, no doubt, the beſt way for both parties. The prices differ ſo much with circumſtances, that it would be difficult to deſcribe them with accuracy. It is ſufficient to ſay, they are in general a good deal higher than thoſe mentioned in the Mid-Lothian Report. But, notwithſtanding, all work, the execution of which could be ſafely intruſted in that way, was always cheaper done by the piece than by day labour, till within theſe few years, that the war, and other circumſtances, having ſwept away the labourers, competition is deſtroyed, and an undertaker can always contend for his own price.

SECT. 5.—*The Accommodation of the Labourers in Agriculture, reſpecting Food and Fuel.*

Oat-meal, potatoes, and milk, either ſkimmed or butter-milk, are the principal component parts of labouring peoples food in this county. The ſervants maintained in farm houſes, always breakfaſt on a kind of haſty pudding, made of oat-meal, well known through all Scotland, and ſome of the northern parts of England, by the name of porridge. This is eaten moſtly with butter milk, and is not only wholeſome and nutritious, but very grateful to the ſtomach of all who have been habituated to it. The bread is either thin unleavened cakes of the ſame meal, baked on an iron plate hung over the kitchen fire, called the *girdle*, or bread made of peaſe or barley-meal prepared in the ſame manner. Farmers, for the uſe of their families, ſalt up beef in the month of November. A portion of this is boiled twice or thrice a week, ſo long as it laſts, in broth, in which huſked barley, cabbage, greens, or other culinary vegetables of the ſeaſon, are mixed. The broth and beef make the dinner, while they laſt; and cheeſe, and ſometimes butter, &c. are ſerv-

ed in the intermediate days. Potatoes are often uſed in place of bread; and they, or porridge, with milk, make the ſupper. Butcher meat is leſs frequent in Summer, when milk is plenty, but is always provided in harveſt. Herrings, ſometimes freſh, but more frequently ſalted, make alſo a part of the proviſions.

It may well be ſuppoſed that day labourers, who have not only themſelves, but generally families to provide for, are leſs plentifully fed than farmers ſervants; but their manner of living, ſo far as they can attain, is pretty much the ſame. Very little butcher meat is conſumed in their families. Herrings and potatoes make a frequent meal. When circumſtances admit, thoſe who can afford it keep a cow, ſell part of the milk, and conſume a part at home. Tea and wheat bread are the prevailing luxuries among the lower ranks. Few are the luxuries of the poor! and it would be cruel to grudge them ſuch as they can attain. Yet it is to be regretted that the uſe of wheat bread is become ſo general among them. The Scottiſh nation has long found a wholeſome ſupport in oat-meal. Oats require leſs cultivation, and can be raiſed in much greater quantity than wheat; and conſequently the ſupply muſt be more liberal, when the former, rather than the latter, is the chief baſis of food.

It has been already ſhown, that coal is abundant through a great part of the county. The material of peat is not leſs ſo; and peats were formerly made by all the inhabitants reſiding near the moſſes: but they are now too much engaged otherwiſe to ſpend their time in making peats. And though the price of coals, including carriage, is tripled within theſe 40 years, they are found the cheapeſt, as well as the beſt fuel; and the uſe of peats is almoſt abandoned, except in the upper parts of the county where the coal is moſt diſtant.

## CHAPTER XI.

### POLITICAL ECONOMY, AS CONNECTED WITH, OR AFFECTING AGRICULTURE.

#### SECT. I.—*Roads.*

THE firſt Scots ſtatute which provides for the making and upholding of public roads, is that of Charles II. anno 1669. cap. 16. This ſtatute ordains, That all tenants and cottars ſhall be called out on the highways, with all their carts, ſledges, ſpades, ſhovels, picks, mattocks, &c. to work ſix days in the year, between bear ſeed time and harveſt, for three years, and four days in the year ever afterwards. To make up the deficiency which this ſtrength might not be able to effect, heritors are authoriſed to aſſeſs themſelves to a certain extent, in proportion to their property, to be laid out in building and repairing bridges, &c. This law, which has been ſomewhat modulated and altered by after ſtatutes, is the baſis of the regulations for making and mending roads. It was no doubt the readieſt expedient for the purpoſe; and, perhaps, in the then circumſtances of the times, there might have been difficulty in finding a better. It ſavours ſtrongly, however, of the barbarous notions of feudal times, when the moſt uſeful claſs of ſociety were regarded as ſlaves, ſubſervient to the pleaſure of their ſuperiors. And it ſeems to be equally impolitic and unjuſt, to abſtract from its proper purpoſe ſo large a portion of the labour deſtined for the cultivation of the country, and to lay on one particular claſs the burden of making roads intended for the general benefit of the whole ſociety. Huſbandmen appear to have always regarded the ſtatute work laws in this light, and thus contracted ſuch an averſion to the duty impoſed by them, that it has been, for the moſt part, very reluctantly and ſlovenly performed; and, accordingly, the roads were never in condition to anſwer the purpoſes of internal commerce. As that began to extend, therefore, ſome new expedient became neceſſary, and turn-

pike laws, which, in a more equitable way, lay the burden of making and maintaining a road on paſſengers, in proportion to the uſe they make of it, were introduced. But this regulation by no means lightened the burden formerly impoſed on the cultivators of land. While the huſbandman, like others, paid his tolls on the turnpike road, he was ſtill liable in the old ſtatute duty. In ſome inſtances, indeed, manure for land was exempted from tolls; and at length new acts were obtained to convert the ſtatute labour into money, and commutations were accepted, moderate when compared with the preſent value of the labour.

The making of roads is the firſt ſtep towards the improvement of any country; and, in a country where the ſoil is naturally ſoft and retentive of water, no improvement can take place, till good roads of communication are made. Accordingly we find that the progreſs of agricultural improvement has uniformly followed the making of roads in this county. Turnpike roads were firſt introduced about the year 1755, in making the road between the cities of Edinburgh and Glaſgow, by the Kirk of Shotts, and by Hamilton to Ayr; and though on account of the total ignorance and inexperience in the buſineſs, and the difficulties to encounter from the nature of the ſoil and materials, this was a very arduous unpromiſing undertaking at the beginning, yet by the laudable perſeverance of the gentlemen of the county, all difficulties were overcome, and the road has become of no leſs conſequence in promoting improvements in agriculture, along its courſe, than in facilitating internal commerce. New houſes were built; the fields were incloſed and ſubdivided; and, from the eaſier conveyance of manure, a new appearance of fertility given to the country. Since this firſt eſſay, the number of turnpike roads has been greatly multiplied. The ſame public ſpirited zeal has been exerted through all the county. Landholders, wealthy individuals, and bodies corporate, have united in obtaining acts of parliament, and advancing money for making roads through different tracks, in various directions; ſo that convenient

communications are now opened, towards all quarters, through this county, to the moſt diſtant provinces of the kingdom; many of them paſſing through tracks which were almoſt entirely deprived of the benefit of intercourſe before, there being either no roads, or ſuch as were not paſſable for loaded carriages. Beſides the building of bridges, and other appendages to the roads, the making of the roads themſelves has, in ſome places, been very expenſive. The ſoft ſand-ſtone found in ſuch places proving inſufficient, the roads have been obliged to be made with hard ſtone, ſometimes brought from rocks at ſeveral miles diſtant: Hence the expenditure neceſſary for the accompliſhment of all theſe great works has been immenſe; and if time and room would allow to ſtate it here, would give a very advantageous idea of the liberality of the gentlemen of the county. In ſeveral inſtances, the revenue ariſing from the tolls is very inadequate to the expence of making the roads, not yielding perhaps above three per cent. of intereſt on the outlay; but the creditors have the ſatisfaction to ſee that they have contributed much to the improvement of their country, and all of them are, in ſome meaſure, partakers of the advantages ariſing from it. Nor has the ſpirit for making roads been confined to the great lines. Theſe opening the communication, branches of inferior note have every where been directed towards them. The ſtatute work of the different pariſhes has been generally converted into money, and many who have intereſt in particular roads, upon the faith of being paid by inſtalments from theſe funds, have advanced the expence, and made them by anticipation, ſo that the principal pariſh roads are moſtly in pretty good order.

It has rather been unfortunate, that this county embarked ſo eagerly in road making, before all the requiſites of a good road were ſufficiently underſtood. The old roads, without regarding inequalities in the courſe, generally proceeded ſomething near the direction, which ſeemed to be the readieſt to ſome known ſtation, and ſo on from that to the next. Except a little finical ſtraighting, pretty much

the ſame conduct was followed in laying out the new. The inconveniency of ſteep pulls was loſt, in the main and more obvious aim of making roads regular, ſmooth, and firm, inſtead of the former aukward, rugged, and miry ones. From this, and other circumſtances unavoidable, where human fallibility is the guide, and ſo many people of different views and opinions concerned, miſtakes have been committed, and the roads have not at all times been conducted in the moſt eligible courſe. But where the main deſign was ſo public ſpirited—where ſo many ſacrifices of private intereſt and perſonal eaſe have been made—and where the general reſult is ſo beneficial,—it would ſhow an unpardonable want of candour, to cenſure little errors with ſeverity. Now that experience has ſhown the diſadvantage of carrying a road over knolls, the pulls have been eaſed, and the early made roads much improved, wherever the funds would admit. In laying out the later ones, more enlarged ideas have taken place,—former errors have been avoided, —and inſtances of great judgment have been ſhown, in ſhunning the natural difficulties of the country, and conducting the road by the eaſieſt route. This is particularly the caſe, in the roads from Glaſgow, by Muirkirk, to Dumfries, &c. and that which croſſes it at Kilbride, leading from Hamilton to Ayrſhire. The road now making, from Edinburgh, by Airdrie *, to Glaſgow, is alſo conducted in a remarkably level eaſy line, as are ſome new roads near Leadhills. Upon the whole, notwithſtanding the ſoftneſs of the ſoil, the inequalities of the ſurface, and the great expence neceſſary for making and ſupporting roads to ſtand the fatigue of ſo many heavy carriages, the roads of this county are ſo many and ſo well kept, as to anſwer all the purpoſes of an extenſive inland commerce. And perhaps no where in the kingdom are travellers better or cheaper driven, or commodi-

* This road is now completed. It has been executed at an enormous expence; but to the honour of the gentlemen, under whoſe auſpices it has been conducted, it may be ſaid, that it is in no reſpect inferior to any other road in the iſland, of the ſame length.

ties carried at an eaſier rate. Nor are there many inſtances, probably, of greater weights being drawn; for it is not uncommon for a ſingle horſe to draw a ton and an half on a cart.

### SECT. 2.—*Canals.*

The Forth and Clyde navigation is ſo well known, that a minute deſcription of it would be ſuperfluous; and, beſides, its courſe in this county is ſhort. At 156 feet above the level of the ſea, it enters the north corner of the county in the pariſh of Calder, and goes again out of it, into Dumbartonſhire, at the aqueduct bridge over the Kelvin. This bridge has been much viſited by ſtrangers, and is admitted to be a ſtupendous work of its kind. The length of the Canal's courſe within the county is eight miles. At a place called Stockingfield, a collateral branch is brought off towards the city of Glaſgow. It ended at Hamilton hill, an eminence at a little diſtance from the city, and was afterwards made to approach ſomewhat nigher. At the end of this branch a large baſon is formed, and granaries, ſtorehouſes, &c. built around. This place is called Port Dundas, and ſtands on the top of a little ſteep hill within half a mile of the Croſs of Glaſgow. The length of the branch is two miles and three quarters.

There is another inland navigation in the county, called the Monkland Canal. It was begun by the authority of an act of parliament obtained in 1770, and carried from the centre of the coal works in the pariſhes of Monkland, upon a level of 252 feet above the ſea, as near Glaſgow as the ſame level would admit of its approach. The principal intention of this undertaking was, to increaſe the ſale at the Monkland coaleries, and furniſh Glaſgow with a more plentiful ſupply of fuel. The coals were brought in boats to the extremity of the canal, and from thence let down an inclined plain formed of wood. At the foot of this they were again put in carts, and carried to the town. The circumſtances of the times having occaſioned the demand to be leſs conſiderable than was expected, and the repeated

ladings and reladings of the coal having inflamed the expence of the carriage, and injured the fuel in the opinion of conſumers, the ſubſcribers found the canal buſineſs an unprofitable concern, and came to the reſolution, in the year 1782, to diſpoſe of the ſtock by public auction. Mr. Stirling of Drumpellier, and the mercantile company with which he was connected, became at laſt the ſole proprietors of this navigation. An agreement having been made between the proprietors of the Forth and Clyde navigation and them, for their joint advantage, the canal has been carried eaſtward to receive a ſupply of water from the North Calder, the ſource of which is a lake on the ſummit of the country, upon the confines of the county of Linlithgow, and weſtward to join the branch of the Forth and Clyde navigation at Port Dundas. The length of this navigation is about 13 miles. It is raiſed at the weſt end, from Port Dundas, by eight locks, 96 feet, and at the eaſt end, near Airdrie, to bring it in a level with the channel of the Calder, by two locks, 21 feet. Its width at the ſurface is 30 feet, and 15 at the bottom; the depth of water about 5 feet. By this canal, coal, &c. is carried weſtward from the coaleries, and dung, lime, &c. caſtward, as manure for the adjacent lands.

A more extenſive canal, to paſs from Glaſgow to Edinburgh through the middle of this county, was projected a good many years ſince; and about five years ago there was a great proſpect of it being carried into execution. The principal intention of this undertaking was, to furniſh a more abundant ſupply of fuel to both the above cities, from the immenſe beds of coal which lie dormant in many places of this county, and to carry lime from thoſe parts in the track of the navigation where it abounded, to others where it was wanted. Theſe carriages alone, it was believed, would have occaſioned a conſiderable buſineſs on the canal; —induſtry, in different ſhapes, would have been aroufed along its banks—latteral branches would have been brought in to join it—new products would have been raiſed through all the adjoining country—and eaſy intercourſe would gra-

dually have advanced the induſtry and fertility of extenſive diſtricts, preſently wild and deſolate, in a very high degree. On theſe conſiderations, ſo ſoon as the deſign of carrying this undertaking into execution was publicly advertiſed, there was an appearance of ſubſcribers ſufficient to advance the money neceſſary for the purpoſe. Surveys were appointed, and made along different tracks, by Mr. Ainſlie, as a ſurface ſurveyor, and by Meſſrs. Grieve and Taylor, as mineralogiſts; and very favourable reports were returned. But this horrid war having commenced, the attention of the public, and the capitals of moneyed men were diverted into a courſe diametrically oppoſite; and the hopes of this great national improvement being effectuated are now more remote.

### SECT. 3.—*Weekly Markets and Fairs.*

It is leſs the cuſtom in this, than in ſome of the neighbouring counties, for huſbandmen to carry their produce immediately to market. A ſet of intermediate people generally come between the raiſer and conſumer. Fowls, eggs, &c. are collected by itinerant dealers; and cheeſe, and butter alſo, is either ſold to ſuch people, or to huckſters reſiding in towns. Grain of all kinds, likewiſe, is ſold either to dealers or to the conſumer by ſample. Hence there is little occaſion for a concourſe of the country people with their commodities to market; and the weekly markets in the different towns of the county are much leſs attended than formerly. But there are ſtated days in the week for market days in all the towns, and the commodities of the country are ſtill carried occaſionally to theſe, and particularly to Glaſgow, being the chief conſumpt, to which there is ſtill a great reſort for the ſale of conſumable commodities, on the Wedneſdays. A weekly market, for the ſale of horſes and milch cows, is alſo held there every Tueſday and Wedneſday, for two months, after the middle of January, yearly.

Though fairs are not ſo crowded as they are ſaid to have been in former times, there is ſtill a great reſort to many of them, held at the towns and villages of the county.

Fairs are held at Carnwath, Carſtairs, Lanark, Carluke, Douglas, Leſmahagow, Stonehouſe, Strathaven, Hamilton, Shotts, Airdrie, Rutherglen, Kilbride, and Glaſgow. The times at which theſe fairs are held may be ſeen in all the almanacks. In them are ſold, wool, flax, lambs, cattle, horſes, &c. At ſuch meetings farm ſervants are generally hired. The fairs are moſt frequent in the ancient burghs of Rutherglen and Lanark. Near the village of Kilbride, three or four weekly markets, for the ſale of ſheep, are held on the Saturdays, the latter part of May and firſt part of June yearly.

The cuſtoms exacted at weekly markets and fairs, are certain taxes which the magiſtrates of burghs and the proprietors of ancient baronies are, by the laws and cuſtoms of the nation, authoriſed to levy from the inhabitants of the country, who reſort to ſuch meetings to ſell their commodities. This is one of the ſtigmas which the barbarous policy of the feudal ſyſtem has affixed on the cultivators of land. Theſe dues are always exacted inſolently, and frequently with violence, by the meaneſt tax-gatherers; and are commonly paid by country people with indignant reluctance.

## SECT. 4.—*Commerce and Manufactures.*

Before the commencement of the preſent century, this county was but little known, either for its commerce or manufactures. It was from the ports on the eaſt coaſt that the intercourſe of the kingdom with foreign countries was carried on; and this county had not a great quantity of commodities to exchange. It does not appear to have been remarkable, either for the quality of its wool, or for ſkill in manufacturing it, at any period of which tradition hands us down accounts. The manufacture to which the inhabitants chiefly betook themſelves, beſides fabricating the neceſſary articles for domeſtic uſe, was that of linen. Before the union, a conſiderable traffic was carried on, in ſeveral towns of the county, of collecting linen yarn, and exporting it to England, beſides what was wrought up into cloth; and, fifty years ago, the women were become famous

for making fine linen yarn. Various branches of the linen manufacture have been eſtabliſhed, from time to time, in different parts of the county; many of the inhabitants have been inſtructed in the art of weaving; and that art has been admitted to be brought to a conſiderable degree of perfection. But the independent manufacturing eſtabliſhments, in the central parts of the county, have all ſunk, one after another; and, as the city of Glaſgow has advanced in commerce and wealth, almoſt all the manufactures of the county have ultimately centred in it; and it being now the great mart of every commodity produced in the county, the commerce and manufactures of Glaſgow comprehend the whole.

Before the reformation, Glaſgow ſeems to have been little concerned in any branch of ſecular induſtry. Being the ſee of a rich archbiſhopric, its inhabitants were either eccleſiaſtics, or ſuch as drew their ſupport from the plentiful revenue raiſed by clerical addreſs. But the hierarchy cheriſhed in its boſom a viper, which, as ſoon as it gathered ſtrength, was to ſting its patron to death. The doctrines of the reformation were greedily received in the weſtern parts of Scotland; and many of the inhabitants of Glaſgow became ſtrongly tinctured with them. When the intereſt of the great concurred with the religious zeal of the vulgar, the eſtabliſhed religion was the eaſy victim of ſo powerful a combination: and the bold ſevere people, who had inveighed ſo loudly againſt the ſloth, the knavery, the luxury, and the licentiouſneſs of the clergy, reſolute to act an oppoſite part, in every reſpect, aſſumed a new ſtyle of manners, and earneſtly ſet about working themſelves a livelihood, by what they deemed more creditable means. Accuſtomed to accommodate the occaſional wants of the numbers who reſorted to the metropolitan ſee, on a religious account, the inhabitants of Glaſgow were ſomewhat inured to the habits of traffic and manufacture, which they now improved. The manufactures exiſting in the county were extended, ſome new ones introduced, and the internal commerce of

the country gradually enlarged. Foreign commodities, to ſupply the demand of the neighbouring country, were imported; and fiſh, caught in the river or its eſtuary, and ſalted, with ſome other ſmall articles, exported in exchange. The ſmall capitals thus employed in the hands of people whoſe auſtere manners forbade the uſe of every amuſement, and led to an unremitting attention to buſineſs, and the moſt rigid economy in the exerciſe of it, could not fail to increaſe. The ſpirit of Glaſgow communicated itſelf, in ſome meaſure, all around, and the county was ſlowly advancing in wealth and induſtry, when the treaty of union between the two kingdoms was concluded, and laid open a direct trade to all the Britiſh colonies.

Thoſe induſtrious merchants quickly availed themſelves of this event: commerce made rapid progreſs, and not only continued to enlarge the ſcale, on which all the former manufactures were conducted, but, from time to time, introduced various others, which, from ſmall beginnings, became extenſive and flouriſhing. In this manner the commerce and manufactures of Glaſgow advanced, and had arrived at a great degree of proſperity at the commencement of the American war. This put a ſtop to the tobacco trade, which had hitherto been the principal ſource of wealth, and diverted the induſtry of the country into a different channel. The war, which for ſome years checked the progreſs of trade, was no ſooner ended, than the capitals, acquired by a long courſe of ſucceſsful induſtry, were ſent in queſt of new employment. That wonderful exertion of human genius, the machinery for ſpinning cotton, had now been invented, and brought to ſuch a height, as to prepare the material for the loom, in much greater perfection, and at a much cheaper rate, than heretofore. The manufactures of Lancaſhire, which, before, were much employed on cotton, were extended and improved, by means of yarn obtained from the new machines; and, as they advanced in refinement, had begun to vie with the elegant productions of the eaſtern looms. This inflamed the emu-

lation of Glaſgow. All the new machinery neceſſary for the cotton manufacture were introduced into the county; large quantities of the raw material were imported; and not only all the different kinds of goods, formerly made of linen, but imitations of the various manufactures of India, formed from that material. The art of dyeing was much improved; and a durable tincture, of various hues, given to cotton. The printing of cloth, too, made great advancement; and large quantities of cotton garments, of elegant patterns, were executed and exported, with other goods, to the different markets of Europe and America. But the conduct of this manufacture was not confined to people of capital and eſtabliſhed credit. The banks were become numerous; and, if they were not all poſſeſſed of large capitals, from the manner in which they had, for a conſiderable time, been conducted, they had at leaſt obtained very extenſive credit; which, from the proſpect of greater emolument, they liberally parcelled out among the manufacturers, and ſtrove with one another who ſhould have the greateſt ſhare in the buſineſs. By ſuch means, adventurers, without ſtock or experience, were enabled to contend with thoſe who had both; and the contention of ſo many individuals, to enlarge their own particular concerns, raiſed the wages of every branch of manufacture to an immoderate height. The numbers of people already engaged in the manufacturing occupations being inſufficient, new ones flocked to the different works, from all quarters and all employments; the males to the loom, the females to the flowering of muſlins, &c. Even thoſe who, from their tender years and weak capacities, were hitherto reckoned unfit for any kind of profitable labour, found employment in the cotton mills, and other ſmall works; ſo that there were perhaps few families in the county, ſome part of which was not engaged in this extenſive manufacture. Of 126,000 people, which was about the population in the year 1792, if we comprehend all claſſes, from the maſter manufacturer to the child begun to plant the teeth of cot-

ton cards, the number thus employed muſt have been 60,000, or upwards. When the high wages are conſidered, the annual value of all theſe peoples labour muſt have amounted to a large ſum: but it would be ſcarcely poſſible to make a fair computation of it, the manufactures of Glaſgow not being confined to the county, but having extended over a conſiderable part of Scotland. It has been ſaid that the operation of theſe manufactures on the materials imported in a year, added, at leaſt, a million to their value; and when the profits of the manufacturer, reſiding in Glaſgow, are taken into view, it might have been ſuppoſed that ſo much ſhould have centred in the county, as would have tended greatly to enrich it, and better the condition of all claſſes of the inhabitants. But a long courſe of proſperity having baniſhed the frugal habits by which former wealth was amaſſed, an oppoſite ſtyle of manners had taken place, and pervaded all ranks; and upon the approach of the war, this phantom of proſperity ſeemed to have vaniſhed, and, "like "the baſeleſs fabric of a viſion, left not one trace behind."

Commerce ſuffered a ſevere ſhock—goods were accumulated in the hands of the manufacturers—frequent bankruptcies occurred—and great numbers of the operative people were thrown idle, and without bread. The conſternation was general and great, but not of long duration. The ſurplus artificers betook themſelves to the army, or emigrated; and the buſineſs of manufacture, being diſencumbered of moſt of the raſh unexperienced adventurers, was left to the conduct of thoſe whoſe capitals, abilities, and profeſſional knowledge, were more adequate to the employment. Theſe expert people did not remain inactive; but having diſcovered new vents for their goods, began to act on ſurer grounds than before; and the manufacture has been ſteadily carried on with great ſucceſs ever ſince.

Though the magnitude of the cotton manufacture, in a general view, is ſuch, that it

"Like Aaron's ſerpent ſwallows up the reſt,"

there is a great variety of others in the county, and more

particularly at and around Glaſgow, in which large capitals and great numbers of labouring hands are employed.

The manufacture of caſt iron goods, at the iron works, has been mentioned. By theſe are made cannon, balls, mortars, ſhells, grates, ſtoves, pots, and a long liſt of different utenſils. Smith work, in malleable iron, is alſo done to a conſiderable extent; and buildings are now erecting on the banks of North Calder, near Airdrie, for mills to ſplit iron, where it is propoſed to manufacture different kinds of Birmingham goods.

The tanning of leather, and the manufacture of boots, ſhoes, and ſaddlery, is carried on to a conſiderable extent, in different parts of the county.

The linen manufacture is ſtill carried on, though on a more contracted ſcale; and great quantities of nuns thread are manufactured. The inkle manufacture was early introduced into Glaſgow, and is now pretty extenſive. Carpets, and other coarſe woolen goods, and hats for domeſtic and foreign ſale, are alſo manufactured.

Not only manufactures of bricks, tiles, and the coarſer kinds of pottery, but of delft and ſtone ware, bottle and flint glaſs, for all the different purpoſes, have been long exerciſed.

To this liſt may be added the manufactures of ropes, lines, and cordage of all kinds; of ſoap, candles, ſugar boiling; the founding of printers types, printing, dyeing, bleaching, printing of garments, &c. &c.

To give a more minute detail of all the different branches of manufacture exerciſed in the county, would be as difficult as needleſs. But a juſt ſtatement of their extent, of the capital they occupy, the profits which accrue, and the numbers which they employ and ſupport, might be more important, if it could be given. Any attempt of that kind, however, would be merely conjectural, and might tend more to miſlead than inform. The reader muſt therefore be left to form his own conceptions on the ſubject.

The ports on the Clyde, through which the foreign commerce of Glaſgow is tranſacted, lie in another county, in the

Report of which the tonnage of the ſhipping employed will probably be given, by which the reader will judge of its extent.

This great extent of commerce and manufacture, while it has, on the one hand, tended to promote agriculture, by enlarging the demand for its various productions, has, on the other, proved a great check to the gradual progreſs of agricultural improvement, and prevented that increaſe of land produce which a growing population required. It has withdrawn the capital, and allured the moſt enterpriſing inhabitants from the cultivation of land, to the purſuit of more ſplendid projects: it has ſeduced the peaſantry from their reſidence in the country and the labour of the fields, to ſeek a life of greater eaſe and enjoyment in towns and manufacturing villages. The new modes of life introduced into the cluſters of artificers, among whom the profligate and the diſſipated generally make a part, have ſpread their contagion among the lower orders of the people, tending not only to enervate the body, and diſqualify it for laborious exertions, but to contaminate the morals, and deſtroy that ſimplicity and decency of manners which is their moſt important quality, either with reſpect to their own intereſt or that of ſociety. The tempting encouragement of manufacture has thus diminiſhed the number, and raiſed the wages of labourers to a great pitch. While the advance of rent, of wages, &c. has inflamed the expence of cultivating corn, the facility of commerce, and the encouragement of bounties, enabled the merchant to import it at a lower rate than it could be raiſed in a cold and barren country. This, accompanied with the great riſe on all kinds of proviſions obtained from paſture land, induced many occupiers of land to betake to grazing, which occaſioned much land to be left in graſs before it had undergone ſuch culture as was neceſſary to make it produce graſs; by which the preſent produce of the county was diminiſhed, and its future improvement retarded. For when land, naturally fertile, or made ſo by cultivation, is laid in graſs, it is ſoon covered with a cloſe turf, and the quality of the herbage improves while it is

continued in paſture; and when it is again brought into tillage, it repays the patience of the community with an increaſed produce of grain: but on poor lands, and eſpecially ſuch as have a wet bottom, the herbage becomes coarſer and leſs in quantity, the longer it lies in paſture; and the ſoil becoming wilder, the difficulty of improving it is increaſed. The truth of this aſſertion, and of the inference implied, will be acknowledged by the moſt ſuperficial obſerver, who has had occaſion to mark the ſtate of the poorer ſoils of this country for the laſt 30 years; where numerous inſtances occur of fields, the ſurface of which were almoſt naked, about the beginning of the above period, and now, by the ordinary exertions of common farmers, with no manure but the farm dung and a little lime carried annually, are bearing tolerably good paſture; whereas ſuch ſimilar fields as have been neglected, bear little eſculent herbage, and, at the preſent price of all the means of cultivation, could not be now improved without loſs.

### SECT. 5.—*Poor.*

Any attempt to give a ſtatement of the number of thoſe who derive their ſuſtenance from the charity of others, or of the amount of what is thus beſtowed, would be very defective, and give no juſt idea of the ſubject. As to the firſt, the numbers of the poor are certainly very great, and ſeem to have increaſed, as the extenſion of manufacture has afforded more ample ſupport to the induſtrious. After what has been ſaid in the former parts of this Report, it will be needleſs to offer a ſolution of this ſeeming paradox. Beſides all thoſe that are to be found on the different pariſh liſts, or are entertained in charity houſes, &c. numbers of mendicants ſwarm from the populous towns of this and the neighbouring county, over all the country, and extort charity by all the arts known to people of that profeſſion. Many of the modeſt, who have ſunk under the preſſure of misfortune, are ſupported by private charity. With reſpect to the ſupport of the poor, beſides the aſſeſſments and other ordi-

nary funds of the different pariſhes, and the charitable inſtitutions, of which there are many in the county (the moſt conſiderable are in Glaſgow, and an account of them may be ſeen in Sir John Sinclair's Statiſtical Account of Scotland, Vol. V. page 518.) very liberal contributions are made in all calamitous emergencies, whether general or particular. The alms extorted by the practice of mendicity muſt ſurely be conſiderable; and the ſweeter oblations of the feeling heart, which impels the right hand to do what the left hand knoweth not, far from trifling. But great as they may be, the poor ought certainly to be ſupported, by whatever means their poverty has been brought about. Happy would it be, if ſome expedient could be deviſed to relieve the wants and ſoften the diſtreſs of the children of misfortune, in a frugal way, without debaſing the minds of thoſe who were ſupported to the abject ſtate of beggary, or inducing idleneſs among others, on the proſpect of ſuch ſupport!

The numerous friendly ſocieties now inſtituted in this county, for the relief of their own members in diſtreſs, ſo far as they go, bid the faireſt for the attainment of this purpoſe. The wiſdom of the regulations made for managing the affairs of theſe ſocieties, and the integrity, frugality, and good effect with which they are adminiſtered, is ſuch, that it would do no diſcredit to any of the higher claſſes, to whom more important truſts have been committed, to have their conduct compared to that of the managers of the friendly ſocieties of Clydeſdale. Every member of any of theſe ſocieties contributes a ſmall pittance monthly or quarterly to the general ſtock, and receives from it, in all caſes of real diſtreſs, a comfortable ſupport. It ſeems to be no leſs the intereſt than the duty of people of the higher orders to lend their aid to make this mode of ſupporting the poor general; ſince it would perhaps contribute to the preſervation of their morals, as well as to their comfort in diſtreſs. People might not only give donations, according to their ability, to one of theſe ſocieties, but they might oblige the ſervants whom they admitted into their families to become mem-

bers of it. The more general it were to enter into ſuch ſocieties, it would become the more diſcreditable to neglect it; and, perhaps, there would fewer remain with that baſeneſs of diſpoſition, which prompts people, either from ſelfiſh or wanton motives, to injure the property of others; for, it is believed, there are few or no inſtances of the regular adherents of theſe ſocieties being caught in crimes.

### SECT. 6.—*Population.*

The following table of the population of the county is moſtly taken from the accounts of the different pariſhes contained in Sir John Sinclair's Statiſtical Account of Scotland, and may be preſumed to be pretty near the preſent numbers.

### TABLE.

| Pariſhes. | Numbers. | Pariſhes. | Numbers. |
|---|---|---|---|
| | | Brought over, | 24,651 |
| Carluke, - - | 1730 | Stonehouſe, - - | 960 |
| Lanark, - - | 4751 | Glasford, - - | 788 |
| Carſtairs, - - | 1200 | Avondale, - - | 3343 |
| Carnwath, - - | 3000 | Hamilton, - - | 5017 |
| Dunſyre, - - | 360 | Blantyre, - - | 1040 |
| Dolphinton, - | 207 | Kilbride, - - | 2359 |
| Walſton, - - | 427 | Shotts, - - | 2041 |
| Biggar, - - | 937 | Dalziel, - - | 470 |
| Liberton, - - | 750 | Cambuſnethan, - | 1684 |
| Lamington, - | 417 | Bothwel, - - | 2707 |
| Coulter, - - | 326 | Cambuſlang, - - | 1288 |
| Crawford, - - | 1490 | Eaſt Monkland, - | 3566 |
| Crawfordjohn, - | 590 | Weſt Monkland, - | 4000 |
| Douglas, - - | 1715 | Rutherglen, - - | 1860 |
| Roberton and Wiſton, | 740 | Part of Cathcart, - | 130 |
| Simontown, - - | 264 | Carmunnock, - | 600 |
| Covington, - - | 484 | Govan, - - | 2518 |
| Pettinain, - - | 386 | Glaſgow and ſuburbs, | 61945 |
| Carmichael, - - | 781 | Barony of ditto, beſides the ſuburbs, - | 3093 |
| Leſmahagow, - | 2996 | Calder, - - | 1767 |
| Dalſerf, - - | 1100 | | |
| Carry over, | 24,651 | Total, | 125,927 |

## CHAPTER XII.

### OBSTACLES WHICH IMPEDE IMPROVEMENTS IN AGRICULTURE, INCLUDING GENERAL OBSERVATIONS ON AGRICULTURAL LEGISLATION AND POLICE.

HERE a crowd of ideas ruſh on the mind, and make it doubtful whether it be proper to ſtop or to proceed. The legiſlature of a great nation, which has too long diſregarded the culture of its ſoil, its moſt important intereſt, or miſtaken the means of promoting it, has at length been convinced of the neceſſity of paying more attention to it, and has choſen, from the moſt diſtinguiſhed claſſes of its citizens, a Board to preſide over the national agriculture, and examine by what means its ſucceſs might beſt be advanced. This reſpectable Board, in order to call the attention of the public more fully to a ſubject in which people of all ranks and conditions are intereſted, has, very properly, ſolicited information from every corner. In ſuch a caſe, it would be affronting the Board of Agriculture, and the public, who expect ample information through this channel, to amuſe them with a few incidental inconveniencies attending huſbandry in a particular diſtrict. Such local inconveniencies have no conſiderable effect on the ſtate of the national agriculture, and would be eaſily obviated by experience and induſtry, ſo far as circumſtances admitted, if the more general obſtacles were removed.

But if it is uſeleſs and unſatisfactory to treat of theſe frivolous topics, alas! it is much to be feared, it would be equally vain to attempt to ſtate thoſe more important and formidable obſtacles, which were firſt founded by ignorance and barbarity, and have ſince been reared and confirmed by prejudice! From the earlieſt periods of ſocial civilization, contemplative men, of all ages and nations, have diſcovered the immenſe importance of agriculture, and exerted the powers of reaſon and eloquence to recommend the practice of it to their countrymen. Though theſe have not been wanting in this iſland,—though the ſafety of property, un-

der the regular adminiſtration of law, and the high demand for every kind of land produce, have long afforded encouragement to agriculture, far ſuperior to what exiſts among the ſurrounding nations, yet ſuch have been the ambitious views of ſtateſmen, with which the public have always too eagerly concurred, and ſometimes ſpurred on, that the purſuit of war and conqueſt, colonization and commerce, has been preferred to the fundamental ſupport of the nation, the cultivation of the ſoil; and the Reports returned to the Board in 1793 and 1794, bear ample witneſs, that agriculture is left far behind by other induſtrious arts. Since ſuch has been the caſe, in ſpite of ſeveral intervals of tranquillity, in which the nation has had leiſure to attend to its internal reſources, and ſtrong leſſons to make them its peculiar care, what hope remains that the feeble repreſentations of an obſcure individual, or even of any number who may happen to concur, can now have any effect, at a time when we are informed, by the beſt authority, we have to ſtruggle for our exiſtence as a people!

> O mortals! mortals! when will you, content
> With nature's bounty, that, in fuller flow,
> Still as your labours open up its ſources,
> Abundant guſhes o'er the happy world;
> When will you baniſh violence, and outrage,
> To dwell, with beaſts of prey, in woods and deſerts?
>
> THOMS. CORIOL.

But, however hopeleſs the execution of this taſk may be, ſince it has been undertaken, it has become a duty; and therefore the great obſtacles to improvement in agriculture ſhall here be ſhortly ſtated: And, though the writer does not mean to confine himſelf to ſuch as are peculiar to this county, which, ſtrictly ſpeaking, would amount to nothing, he will dwell chiefly on thoſe that are common to this and other ſurrounding provinces in ſimilar circumſtances. But, before we proceed, it will be neceſſary to premiſe, that there are circumſtances connected with the ſituation of Britain, which tend to magnify exiſting obſtacles; or, in

other words, theſe circumſtances demand that agriculture ſhould have more ſupport and encouragement in Britain than may be neceſſary in many other countries. The circumſtances alluded to are, 1*ſt*, The climate and ſoil; 2*d*, The inadequacy of the produce of agriculture, in its preſent ſtate, to ſupply the wants of the inhabitants.

1*ſt*, The climate of Great Britain, from its inſular ſituation, is cold and unſteady. Surrounded by a vaſt ocean, its vapours frequently hang over the country, and exclude the maturing influence of the ſun. This is more particularly the caſe with the northern half of the iſland, where the inconſtancy and inclemency of the weather frequently not only interrupt the labours of the huſbandman, but alſo diſappoint his harveſt expectations, in ſpite of all his diligence. Under ſuch a ſky, it is not to be expected that the ſoil can be more favourable. Accordingly, we find its fertility is kept up only by dint of induſtry and attention.

2*dly*, The land produce of Britain ſeems to be ſhort of the demand of its own inhabitants. The writer recollects, that, ſeveral years ago, an inquiry was made, by order of the Privy Council, into the ſtate of imports and exports of corn, to and from all the ports of Britain: The reſult was, that, for an average of 18 years immediately preceding the time of the inquiry, the imports exceeded the exports conſiderably; whereas, for an average of 18 years previous to that period, the balance ſtood greatly on the oppoſite ſide. In order to have ſtated this more accurately than from looſe recollection, application was made at the cuſtom-houſe of Edinburgh for the ſight of a copy of the Report made to the Privy Council, which was promiſed, but has not yet been obtained. Should it be got, an extract ſhall be given in an Appendix. But, if the corn raiſed in Britain was not ſufficient to feed all its inhabitants more than 20 years ago, there is reaſon to ſuſpect, that the deficiency has been much greater of late, when ſuch vaſt imports, from all quarters of the world, have been made.

But, whatever may be the caſe in general, the deficiency,

both of animal and vegetable food, for the ſupport of the inhabitants, produced in this county, is very conſiderable. A few fatted calves, ſome ſheep and lambs, butter and cheeſe, go from the upper parts of the county to the Edinburgh market; but the animals for ſlaughter from the more weſtern and northern parts of Scotland, and the ſalted beef, pork, and butter, from Ireland, and cheeſe from different counties of England, conſumed in Glaſgow and its neighbourhood, are much more conſiderable. The neighbourhood of Glaſgow being the beſt corn market in the country, there is ſcarcely any of the corn raiſed in the county carried out of it; and much from other quarters is annually conſumed in it: but there is no rule by which the quantity of imported corn can be accurately aſcertained. In a late corn law, which preſcribes regulations for the importation and exportation, the county of Lanark is joined with thoſe of Renfrew, Dumbarton, Bute, and Argyll, each of which, and eſpecially the firſt, requires always a great deal of foreign ſupply. But, let us ſuppoſe that the conſumption of Glaſgow is equal to one-third of the whole import. The oats and oat-meal imported into the Clyde, in the year 1790, was 107,000 bolls, of eight ſtones Dutch each boll. The ſame year, there was brought along the canal to Glaſgow, &c. 164,000 bolls of oats, oat-meal, wheat, barley, and peaſe. But a boll of wheat, barley, or peaſe, will produce much more than eight ſtones of meal; let us therefore add one-fourth more to this, or 41,000 bolls, which makes the total import 312,000, and the conſumption of Glaſgow and its neighbourhood, according to the above ſuppoſition, 104,000 bolls, or 832,000 ſtones Dutch. The importation has, ſome years ſince, been ſtill more conſiderable; but this increaſe may, in ſome meaſure, be imputed to the number of cavalry quartered in the country.

It is equally difficult to compute what the whole conſumption of the county may be annually. What is conſumed by the diſtillery, by brewing, and by the great number of horſes kept for all different purpoſes, cannot be aſ-

certained with any degree of accuracy that could be depended on. It is preſumed, that 2½ bolls, or 20 ſtones of all kinds of meal and flour, with the quantity of potatoes commonly uſed, (the moſt part of which are raiſed in the county) may ſerve each perſon, at an average, for farinaceous food, through the year; and, ſuppoſing the population, as above ſtated, about 126,000, the total conſumption (by the human race) will be 315,000 bolls, or 2,520,000 ſtones, nearly one-third of which is imported from different parts.

This deficiency of food, which ſeems gradually to be increaſing, it would appear, is not peculiar to the large province with which this county is connected, but, if what is above ſtated be agreeable to fact, is, in ſome degree, the general fate of Britain, and, therefore, merits the moſt ſerious conſideration. Whatever the ſkill and activity of a nation may be in commerce, or in the refinements of manufacture, it is ſurely alarming to be generally in want of food; as it muſt put the independence and continued proſperity of ſuch a nation on a very precarious footing. Food is the principal and natural wages of labour, the great incitement to induſtry, and the cauſe of the increaſe of an induſtrious population *. A ſufficiency of food, therefore, muſt be the ſtrength of a ſtate; and the means uſed for producing it the moſt important employment. In ſome of the tranſactions of the American Congreſs, publiſhed in the newſpapers a few years ago, here quoted from memory, the Americans, comparing themſelves with the manufactur-

* To avoid lengthening out this Report with numerous quotations, the reader is here referred to a work of great merit, well known to the public, viz. An Inquiry into the Nature and Cauſes of the Wealth of Nations, by the late Dr. Smith, Book I. Chap. XI. Part 1ſt and 2d. This very intelligent and reſpectable author, though he may, perhaps, have erred in ſome particulars, which, in the execution of a taſk ſo arduous, is not ſurpriſing, has favoured the public with a greater number of juſt and liberal principles of political economy than any other book in the language contains. It is hoped, therefore, it will be allowable to reſort to ſuch authority; and it may again be neceſſary to do ſo in the ſequel.

ing nations of Europe, ſay, "We are the maſters and employers of manufacturing people; they are our labouring "ſervants. In our ſuperabundance of proviſions, &c. we "poſſeſs the wages of their labour; we can retain theſe; "we can retrench our ſuperfluities, and abſtain from employing them; but they cannot live without our employment."

Having thus premiſed the ſtrong neceſſity of removing every obſtacle which ſtands in the way of improvement in agriculture, and of uſing every poſſible means to promote its advancement, we come now to ſtate theſe obſtacles; and, it is hoped, what has been advanced will juſtify what follows.

The firſt obſtacle which ſhall here be mentioned, is the little reſpect which has been ſhown to huſbandry, and the marks of degradation and ſervitude which the laws and cuſtoms of the country have attached to the profeſſion. A number of inſtances, ſufficient to illuſtrate this, have been given in the preceding parts of this Report; and to theſe the reader ſhall be referred, without troubling him with a recapitulation. From an employment of ſuch importance, and from which the neceſſities of the nation demand ſo many additional exertions, every thing that tends to damp the ſpirits, or fetter the activity, ſhould be removed. Without taking time to collect authorities, or multiply arguments, to ſhow how unfavourable ſervitude, or whatſoever borders upon it, is to the ſucceſs of agriculture, we ſhall refer to the ſentiments of the reſpectable author juſt now mentioned, from whom we take the following ſhort quotation: "In ancient Italy, how much the cultivation of "corn degenerated, when it fell under the management of "ſlaves, is remarked by both Pliny and Columella *," &c. &c. If depriving the cultivators of land of their freedom tends to depreſs cultivation, then it muſt ſurely follow, that, to put them upon the moſt liberal and reſpectable footing, would greatly forward the ſucceſs of that art.

* Smith's Wealth of Nations, Book III. Chap. II.

The unhappy jealouſy which ſubſiſts between landed and manufacturing people, is another obſtacle to the ſucceſs of agriculture. The author of this, in a former work *, has endeavoured to ſhow how ill founded this jealouſy is, and how ſtrictly the intereſt of both claſſes is united. Our preſent buſineſs is to explain the bad effects of the want of this union. Landed people have beheld, with ſome degree of envy, numbers riſing into conſequence by the effects of induſtry, and have wiſhed to lay that induſtry under contribution, by reſtraining laws, intended to raiſe the price of proviſion. Manufacturing people, on the other hand, have been making perpetual ſtruggles to counteract this; and, by loud clamours of the danger of the poor being ſtarved, have obtained certain relaxations of thoſe laws. Hence has ariſen that contradictory jumble of ſtatutes and regulations, known by the name of the corn laws, and the officious interference of the executive government, in all pretended emergencies. The part which land-holders have taken in forming theſe laws, was, probably, with a view to increaſe their own revenue, rather than to improve the condition of huſbandmen, or promote agriculture. It would ſeem, however, to have been without effect. Rents, indeed, have greatly riſen; but the reſtraining laws have not been the cauſe. The price of butchers meat, and butter, never roſe to a great pitch, till after liberty was given to import live cattle, ſalted beef, and butter, duty free, from Ireland; and the price of corn is not advanced. It is true, indeed, as appears by the table of the fiar prices of grain, given in page 133, there is a ſmall advance of the average money price of each 15 years above the former; but, in the laſt period, there were two years of dearth. Beſides, though there is a ſmall riſe in the money price of corn, its real price is greatly fallen. That the value of money is greatly fallen will not be denied. Whether this has been occaſioned by the increaſed

† Naiſmith's Thoughts on Induſtry, Edinburgh, printed 1790, Book III. paſſim.

quantity of circulating paper, or by what other means, we ſtop not to inquire. The judicious author, lately quoted, obſerves, that labour and corn are the beſt meaſures of the value of one another. Let us try the price of corn by this rule. About the year 1760, and for ſome years after, the wages of a labouring man were 8d. a day. The average price of meal, in that period, is 10½d. per peck; the wages of a day's labour, therefore, would not purchaſe a peck of oat-meal. The average price of a peck of meal, in the laſt period, is about 12½d.; and the wages of a day's labour being 1s. 6d. will nearly purchaſe a peck and an half. Hence the value of corn is reduced more than one-third ſince the year 1760. The real price of beef and butter, the importation of which from Ireland, a plentiful country, is unreſtrained, is, however, advanced. In the year 1760, the wages of a day's labour would have purchaſed at leaſt three pounds of beef, or two pounds of butter; at preſent it will not purchaſe much more than two pounds of beef, and not 1¼ pound of butter. The real price of the proviſions obtained from paſture is, therefore, advanced nearly as much as that of thoſe obtained from tillage is depreſſed.

From this view of the matter, it is obvious, that all the attempts of landed gentlemen to obtain partial laws, for their own emolument, have been without effect. The intereſt of huſbandmen, and the general cauſe of agriculture, however, have ſuffered in the ſtruggle. If the commerce in proviſions had been at all times free, without reſtraints or bounties, importers would have been cautious to import no more than they had a proſpect of ſelling with profit; and the proviſions produced at home would always have had as much advantage in the market, over the foreign proviſions, as the expence the latter coſt in importing, &c., and the damage they often ſuffer by ſea carriage. Hence, in times of ſcarcity, the huſbandmen of the country would have got a higher price for ſuch proviſions as they had to ſell, which, though, perhaps, not adequate to the deficiency

of quantity, would have, in part, compenſated for it. But, according to the preſent economy, this is not the caſe. The crops 1794 and 1795 were much more productive, through a great part of Scotland, than that of 1796, yet the prices of corn were continually riſing during the two firſt productive years, and fell very low before the crop of the laſt leſs productive year was conſumed, the very beſt oats having ſold, in the beginning of this Summer, at 12s. per boll, and under. The preſent Summer, 1797, has been the moſt cold and barren one ever remembered. The crop has been now reaped, and found defective; yet this deficiency has hitherto had very little effect on the market price of corn. Huſbandmen have nothing to ſay in the matter; and, beſides, they are, as has been already ſhown, unequal to ſuch ſtruggles. Landed gentlemen, the champions of the cauſe on the one ſide, are not equal to their opponents. Beſides, the latter have the popular clamour on their ſide, and, apparently, the cauſe of humanity. A miniſter, therefore, finds it neceſſary to lean to this ſide; and, in order to gain popularity, if ſimply opening the ports does not ſatisfy, he grants large bounties to encourage importation.

Thus, it appears, that, if any party has gained by this vain conteſt, it has been the manufacturing intereſt, or the conſumers. But it would have been no worſe for them if the cauſe of conteſt had never exiſted; if importation and exportation of corn had been always free, unaſſiſted and unreſtrained. This was the higheſt of their demand; and it was all they could reaſonably demand. Had this been the caſe, ſo ſoon as an increaſe of induſtrious people, and the more expenſive manner of living, induced by the increaſe of wealth, had raiſed the demand for proviſions above what the preſent ſtate of culture could ſupply, the huſbandmen of the country, having an advantage over thoſe of other countries equal to the whole expence of importation, would have been excited to make new improvements, to anſwer the increaſing demand; and would have, probably, ſucceeded. Conſumers would thus have had the ſure pledge

of a more certain and regular ſupply than can be expected from the operations of foreign commerce.

The writer would have been aſhamed to have dwelt thus long on a topic ſo obvious, if it had not been, that, obvious as it is, the principle does not ſeem to be generally admitted. He, therefore, thinks it his duty to take this opportunity of bringing it once more under the review of the public: and, beſides, it ſeemed neceſſary to ſay ſo much, in order to illuſtrate the poſition, that the diſcordance between the landed and manufacturing intereſts had been an obſtacle to improvement in agriculture. He is of opinion, that this diſcordance has the ſame effect in other inſtances; but he deſpairs of being able to explain them in ſuch a manner as to be fully comprehended. He muſt, therefore, be content with obſerving, that, of all the people whom the allurements of manufacture have abſtracted from the labours of the field, very few ever now return to lend occaſional aid. The connection is entirely broken off, except when they become outcaſts from manufacture, and iſſue forth to beg their bread among the farm-houſes of the country.

The over-ſtretched rent of land, the ſcarcity of labourers, and the high price of their wages, taken together, make a formidable obſtruction to improvement in agriculture. The firſt has been already noticed in this Report, pages 59 and 68, the laſt in pages 53 and 150. The rapid riſe of land-rent ſeems rather, at firſt, to have originated in a kind of frenzy among farmers, than any premeditated deſign of the landlords: but the latter quickly availed themſelves of that frenzy; and have certainly carried the matter too far with regard to the general intereſt of agriculture. This riſe of rent, it would appear, muſt at length come to a period. It has been ſhown (page 131) that the increaſe of rent has not been ſupported by an increaſe in the price of corn; and, from what is ſtated (page 156), there is ſome reaſon to ſuſpect it is not much more ſupported by the increaſe of quantity. The ſcarcity of labourers, and the high price of their wages, adds to the burden of high rent, which make

the husbandman's prospect of profit small and precarious, prevents the increase of his stock, and thus checks his spirit, and weakens his energy in the cultivation of his farm.

The three obstacles above enumerated, are the cause of a fourth, not less considerable; that is, the deficiency of the stock employed in agriculture for the purpose of carrying the improvement of the country to the necessary extent. The low estimation in which husbandmen are held, must, no doubt, sometimes prevent men of generous souls from embracing the profession. The advantages which commerce and manufactures have gained over agriculture, have led much capital and enterprise from the latter to the former. Much agricultural capital was consumed in the numerous bankruptcies which succeeded soon after the great rise of rents took place. At that time, many cautious husbandmen withdrew from the employment, and carried their capitals along with them. And there is little hope, that, in the present state of things, any considerable quantity will return from other employments to the support of agriculture. Agricultural stock has, no doubt, been increasing again, of late years, in the hands of some of the most expert and successful husbandmen; but it has been losing its efficacy in a much greater degree. It is observed, by husbandmen advanced in life, that, in no case, the efficacy of capital is so greatly sunk as in the stocking of a farm; it being generally believed, that, from the difference of the expence of all kinds of utensils and implements, the difference in the value of labouring horses, and other live stock, &c. 20 l. would have gone as far, 40 years ago, as 100 l. will do now.

But the principal obstacle to carrying improvements in agriculture to the greatest height of which the country is capable, is, the great extent of land held in property, by great land-holders, the shortness of the leases given to tenants, and the frequent practice of shifting the tenants at the end of every lease. Loaded with all the hardships and difficulties, enumerated and described in different parts of

this work, under which farmers labour, their exertions to improve their farms can ſeldom be very vigorous; and they are generally too ſolicitous to reap the whole advantage of ſuch meliorations as they are able to make, which they ſometimes carry ſo far, as not only to exhauſt the land, but to hurt themſelves. From the commencement of the leaſe, they begin to look forward to the end of it, and, hopeleſs of any preference to a new one, regulate their conduct accordingly. While the land is cultivated by the labour and capital of thoſe who have no intereſt in its permanent improvement;—while the landlord impatiently expects the fall of leaſes, that he may advance his rental;—while the farmer makes it his ſtudy, as far as the articles of leaſe, or the indolence of the landlord, will permit, to diſappoint this expectation, any great degree of increaſe in the fertility of the country can never happen. Theſe jarring intereſts muſt be reconciled, and the influence of the landholder and the huſbandman collected into one focus, before the face of the country can be effectually improved, and a ſuperior quantity of food from our native ſoil obtained.

The engroſſing of a great extent of land into ſingle farms is another obſtacle to the general improvement of the country. The queſtion of the comparative advantage between moderate and great farms has been much canvaſſed; and many advocates have appeared in favour of great farms. Of late, however, the tide of public opinion ſeems to have turned a little to the ſide of moderate farms. But the author of this having, in a work to which he has already referred, examined this ſubject at conſiderable length, he begs leave to refer the reader again to the peruſal of it *, which, he hopes, will convince the candid mind, that a country will be more advantageouſly cultivated, when a ſufficient number of thoſe employed in the cultivation are engaged, by their own intereſt, to purſue their labours with diligence and attention, than it could be by hirelings.

* Naiſmith's Thoughts on Induſtry, page 603, and onwards.

The only obſtacle of inferior note, which ſhall here be noticed, is the effect of the game laws. Theſe are ſaid to be leſs oppreſſive in Scotland than in England, it having been ſettled, by ſome late deciſions of the Court of Seſſion, that game is property. But ſtill it is the property of the proprietor of the land, not of the huſbandman, on the produce of whoſe induſtry it is fed. The latter muſt not kill the hare that ſpoils his young orchard or his kitchen garden; nay, he would be ill looked upon by all the fox-hunters of the neighbourhood, if he were to deſtroy the robber of his hen-rooſt, though caught in the act. But a pack of hounds, with a dozen of men on horſeback after them, driving with the fury of Bacchanalians, may penetrate his incloſures, trample down his fences, poach over the ground ſoftened with the Winter's rain, deſtroying his young wheat and ſown graſs, and do more harm in an hour than all the hares and foxes would have done in a year. The fowler, too, though a leſs deſtructive animal, ſhows equal diſregard to the property of the huſbandman. Every one who thinks it genteel to be a ſportſman, and can purchaſe a game licence, ſallies forth, wherever the permiſſion or indifference of land proprietors give him ſufferance, as ſoon as the time preſcribed by the game laws arrives, for the deſtruction of grouſe or partridges. In vain the timid birds uſe all the ſpeed of foot and wing to elude the chaſe. The pointers, ſtaunch to the cauſe of blood, and their eager followers, ſtill purſue. Every thing, then, muſt give way to the ardour of the ſport. The annoyance of the peaceful flocks, on the heathy mountains, or the breaking down of fences, and trampling on the corns in cultivated lands, are nothing!! However cautious and reſerved ſportſmen may be, in the purſuit of their game, the huſbandman always ſuffers leſs or more: but the gentlemen have had their ſport, and the ruſtic muſt be ſilent.

It is obſerved, that birds of game have diminiſhed in numbers, as the laws to preſerve them, for the ſole enjoyment of legal ſportſmen, have been made ſtricter. This

has been imputed to the reſentment of huſbandmen, who, it would ſeem, are allowed to have ſome reaſon to feel the inequality of thoſe laws. But the decreaſe in the numbers of game, it is obvious, is owing to another cauſe. Game can only abound where the induſtry of man is not exerted. Animals in a wild ſtate are haraſſed by the progreſs of improvement. They are obliged to ſhun the ſcenes of cultivation—their empire is narrowed—their opportunities of propagating diſturbed by numberleſs accidents—and thus their numbers are gradually diminiſhed, without any intentional interference of huſbandmen. On the contrary, the continued exiſtence of birds of game, in conſiderable numbers, is the ſtrongeſt proof of the implicit obedience which huſbandmen pay to the laws of their country, however adverſe theſe laws may be to the intereſt of their order. If they had all thoſe malevolent intentions which are imputed to them, how eaſy would it be for them and their families, who, in the courſe of their buſineſs, are perpetually exploring the fields, to cruſh the game in embryo, and, in a great meaſure, extinguiſh them!

When population was inconſiderable, and a great part of the country wild and deſolate, ſavage animals were, no doubt, numerous, and would make injurious inroads on the cultivated parts of the country. In thoſe barbarous times, it was the employment of the barons and their retinues, in the intervals of their wars and feuds, to hunt and deſtroy thoſe animals. It was the moſt innocent part of their employment, probably, not ſeldom the moſt uſeful, and, therefore, might juſtly be conſidered as honourable. Poſterity is, perhaps, more indebted to thoſe barons for having extirpated wolves from the iſland than for the greateſt part of their military exploits. Hunting, or the ſport of the field, has, therefore, from thoſe days downward, been conſidered as a gentlemanly employment; and every young man, who wiſhed to be regarded as a gentleman, has thought it neceſſary to qualify himſelf for being a ſportſman. But, happily, thoſe times are now over. Marks of

the induſtry of man, preparatory of more important and ſucceſsful improvements, are ſeen every where through the country. By the effects of theſe, the game is not only diminiſhed in numbers, but thoſe which remain are become naturally more ſhy and careful of their own preſervation. Hence now, inſtead of manly activity and courage, much piddling patience, much low mechanic cunning, is requiſite to ſucceſs in killing game. Nor is the ſervice done to ſociety any longer an apology for the practice of purſuing game. Wherever the induſtry of man has been extended, the numbers of the game are too limited to be injurious; and even the nature of the ferocious, in ſome meaſure, changed. The fox is the only animal of prey which is accounted game in this country. Among the numerous flocks of ſheep, which feed around the Cheviot, abundance of foxes are to be found. The fox is hunted there, but it is only for amuſement: for years elapſe without an inſtance occurring of a ſingle lamb being devoured, by foxes, in a whole pariſh. But if the advantage of ſociety is not now promoted by the purſuit of game, it is, as has been already ſhown, almoſt always, in ſome degree, injured. The ſportſman can ſeldom continue his purſuit, in a great part of this county, for a few hundreds of yards, without committing ſome petty treſpaſs. The anxiety of thoſe, who, by the laws and cuſtoms of the country, are the excluſive proprietors of game, to ſecure the enjoyment of it, may be injurious in other reſpects. The following inſtance will exemplify this: In a county not far diſtant, the ſoil of a great part of which is fertile and highly cultivated, the depredations committed on the crops, by rooks, particularly on the wheat, during the Winter, was found to be ſo enormous, that, ſome years ago, a meeting of the huſbandmen aſſembled, to conſult on the means of preventing ſo great a loſs, as well to themſelves as to the public. The method agreed on was, to employ a perſon to lay down paſte, in which arſenic was mixed, in proper places, for poiſoning the rooks. This was done, and ſucceeded. The rooks eat the

paſte, and numbers of their dead bodies were ſeen ſtrewed in the fields. The huſbandmen, rejoicing at the ſucceſs of their ſcheme, were in hopes that perſeverance would rid them of their waſteful enemies. But accounts no ſooner reached the fox-hunters of the county than they took alarm, leſt the foxes, eating the poiſoned rooks, ſhould take the deleterious potion into their ſtomachs, and periſh; and the amuſement of fox-hunting be thus diſappointed. A meeting of the juſtices of the peace was, therefore, called, and injunctions publiſhed, forbidding all perſons, under ſevere penalties, to expoſe poiſonous ſubſtances in the fields: Thus the rooks are again allowed to multiply and prey on the corn fields.

Since the circumſtances which gave riſe to the laws and cuſtoms relating to game are entirely changed, it would probably be proper that ſome change ſhould be made in thoſe laws and cuſtoms. But it may, perhaps, be thought that too much has been already ſaid on the ſubject; and, therefore, it ſhall be left to the judgment of the public.

## CONCLUSION.

### MEANS OF IMPROVEMENT, &c.

HAVING now, with all poſſible diligence, explored the county of Lanark, in its preſent ſituation and circumſtances, and more eſpecially in ſuch as bear any relation to the moſt ſubſtantial national reſource, the agriculture of the country, we come, finally, to inquire into the poſſibility of making ſuch improvements in this as to correſpond with the advancement of the other induſtrious arts, and the growing population, and ſo to give ſome proſpect of ſecurity to the continued independence and proſperity of the nation. Nor ought we to deſpair of this being accompliſhed, notwithſtanding ſome circumſtances in the climate and ſoil adverſe to fertility, which have been already noticed. Though the climate is unſteady, its variations ſeldom go to deſtructive extremes. If Britain ſeldom enjoys the ſun in unclouded brightneſs, its corn fields and paſtures are rarely parched with his ſcorching rays; ſucceſſive ſhowers, at intervals, generally not very diſtant, irrigating the earth, and keeping up the verdure of the ſeaſon. If the warmth is not ſufficient to forward the progreſs, and exalt the juices of the moſt delicate fruits, it ſeldom fails, when aided by the induſtry of man, to bring thoſe, which are abſolutely neceſſary to the ſupport of the inhabitants, to maturity. The ſoil, too, though ſubdued with more difficulty than in countries more favoured by nature, yields at length to the efforts of cultivation, as may be ſeen from numberleſs proofs over the country. Though agriculture, as a regular art, is but in its infancy, and has laboured under many difficulties, it has made conſiderable progreſs, and has paved the way for more important improvements. Even in theſe northern diſtricts, inſtances occur, of land, formerly barren, now producing corn crops, which would be thought large in countries naturally more fertile. When we conſider, alſo, the ſpirit and enterpriſe of the inhabitants, and how far they have

gone beyond the neighbouring nations in other branches of induſtry, there is no cauſe to think they ſhould be deficient in the cultivation of the ſoil: and, we may reaſonably hope, that, with proper encouragement, the agriculture of the country might not only furniſh an ample ſupport for the preſent inhabitants, but for a much more extenſive population. Though ſpeculative calculations are not greatly to be depended on, it may be agreeable to ſee that ſuch might, in ſome meaſure, be the caſe, even in the populous, and comparatively barren diſtrict, which is the ſubject of this Report. The total ſurface extent has been ſuppoſed to be 445,440 acres. The cultivated lands, and waſtes capable of being cultivated for corn, may be about the half of this extent, or 222,700. Agreeable to the practice of this and neighbouring counties, as ſtated page 69, of allowing the land, which has been cultivated, to meliorate by paſturing, let us ſuppoſe two-thirds to be always in green crops, fallow, hay, and paſture. If 74,000 acres, the remaining third, were cultivated for the different kinds of bread-corn *, with all the attention which has been beſtowed on particular ſpots, it does not ſeem to be extravagant to ſuppoſe, that each acre, on an average, might furniſh bread for two people, beſides ſeed and the food of farm horſes; and thus the produce of the county would feed all its preſent inhabitants, and furniſh a part of what is conſumed by other horſes, &c. Nor need we limit the fertility of the county to this extent. Well cultivated land returned to paſture would ſtill be increaſing in fertility—every increaſe in crop would occaſion an increaſed quantity of manure—and the fertility of the land, and the quantity of corn it could produce, would gradually become greater.

A perſon who, from early life, has been taught to admire the ſuperiority of the Britiſh conſtitution, as the moſt favourable to civil liberty, will naturally be led to attribute

* It is to be obſerved, that the poor uſe a great deal of meal made of barley and peaſe.

the national proſperity chiefly to this cauſe. From a juſtifiable partiality to the inſtitutions of his country, he will view with pleaſure the attention which has been paid to the comfort and convenience of the whole ſociety, and the equitable laws which encompaſs the rights and properties of the meaneſt. He will conſider the adminiſtration of theſe as having called forth the native energy of the people, and foſtered that proſperity to which they are arrived. Convinced that the perfection of political liberty is the happineſs of a nation, it will ſcarcely be poſſible for ſuch a one to avoid turning his thoughts that way, when propoſing meaſures for the improvement of agriculture; and ſurely there can be little cauſe to fear, that, in ſo doing, he can give offence to a public, whoſe partialities, from the ſame cauſe, muſt be the ſame with his own. His fate, indeed, may be like that of the propheteſs Caſſandra, or of thoſe boys, mentioned in an ancient book which we all pretend to revere, who, "ſitting in the market place, piped, but no "man danced,—grieved, but no man mourned." It is incumbent on him, however, to ſtate what he apprehends to be the truth. It may not be uſeful at preſent, but it will at leaſt be innocent; and, ſhould it furniſh hints to be improved on in future times, it will not be without effect.

In the proſecution of this inquiry into the means of promoting the ſucceſs of agriculture, we ſhall firſt conſider how the great obſtacles, enumerated in the laſt chapter, may be removed, taking them in the order in which they are ſtated, and then venture a few hints for improvements in ſome other particulars.

The firſt obſtacle ſtated, was the low eſtimation in which huſbandmen are held in the ſcale of ſociety, and, more particularly, the marks of degradation affixed to the profeſſion, by certain laws and cuſtoms of the country. Mankind are ſo much governed by habit, that what is perpetually paſſing under their eye ſcarcely ſtrikes them. For this reaſon, it is probable, this obſtacle will be thought frivolous; even its exiſtence will, perhaps, not be admitted. But let it be re-

collected, that roturier, boor, clown, country fellow, &c. are terms of contempt in all the countries of Europe: and no perſon of ordinary obſervation can avoid ſeeing, that the other claſſes of ſociety, in their intercourſe with country people, look as if they would ſay or think, "Ruſticus es, "Coridon!" A girl bred in a neighbouring town, accompanied a party on a viſit to a country houſe: The country people entertained their city viſitors with great hoſpitality. Tea was ſerved, accompanied with the richeſt cream the dairy could afford. The girl, on her return, obſerved, that every thing was coarſe in the country. How clumſy, ſaid ſhe, was the cream we got to tea! The inſtances given in former parts of this Report, of mill multures, work at roads, cuſtoms at fairs, &c. may ſerve to illuſtrate the remainder of what is ſtated as an obſtacle.

The great truſt committed to huſbandmen, of propagating and managing the proviſions of the community, is an office of the firſt importance, and is, ſurely, in the eye of reaſon, entitled to reſpect. The difficulties, from ſoil and climate, with which the huſbandmen of theſe northern parts muſt ſtruggle, are ſufficiently diſcouraging. Inſtead of additional burdens, every thing ſhould be done to encourage and enliven their uſeful toil. All laws and uſages, therefore, which bear unequally hard upon huſbandmen, or affix any thing like degradation or ſervitude to the profeſſion,—all the privileges of other claſſes, which, in any manner, are at variance with their juſt rights, ought to be aboliſhed; and, ſo far as it were practicable, and conſiſtent with juſtice to the reſt of the ſociety, every encouraging mark of diſtinction ſhould be beſtowed. The Board of Agriculture are now the eſtabliſhed patrons of the art; and to them its profeſſors look up for relief and encouragement. To their wiſdom theſe rude hints are ſubmitted.

If the legal degradations alluded to (the more weighty part of the obſtacle) were removed, the popular prejudices would follow of courſe; and to this the correct conduct of huſbandmen would greatly contribute. There is no profeſ-

ſion in which there are fewer temptations to fraud and low cunning than that of agriculture. No nefarious practice, which a huſbandman, in the courſe of his buſineſs, could reſort to, nor even a whole life of deceit, could add any thing conſiderable to his wealth; but the diſcovery of his baſeneſs would probably ruin him. For the proof of this we may have recourſe to common experience. Look to the thriving huſbandman! He is, indeed, active in his buſineſs and attentive to his intereſt; but, in his tranſactions with others, he is open, candid, and ſincere, ever ſtudious to avoid taking, or appearing to take, undue advantage. Again, thoſe who are guilty of knaviſh practices, feeling themſelves depreſſed with a ſenſe of the impropriety of their own conduct, and the imputations it draws upon them, are generally feeble in their exertions, and their affairs unproſperous. Neither does this line of buſineſs prompt to other unſocial paſſions. The intereſt of a huſbandman is never hurt by the ſucceſs of neighbours; on the contrary, a number of induſtrious and ſucceſsful cultivators is the beſt neighbourhood for each of them. Hence there is little room for malice and envy ariſing among them. Thoſe, therefore, who allow themſelves to act a mean, ſhuffling, diſhoneſt, or unhandſome part, are doubly culpable, deſerve the abhorrence of all the virtuous of their order, and ought to be excluded from the benefit of the ſociety, having forfeited all right to the character of huſbandman. The writer thinks himſelf thus juſtified, in earneſtly admoniſhing the people of this profeſſion, as they regard their own intereſt, the honour and reputation of their order, and the ſucceſs of the art in which they are engaged, that, while they are diligent in their labours at home, and attentive to all the minutiæ from which their intereſt and advantage is derived, when they are neceſſarily called out to the commerce of the world, they would avoid all deceit, all the chicanery of mean jobbers, and be open, juſt, and liberal, in all their tranſactions. Let ſtrict probity be the rule of their conduct;—in ſhort, let them be what huſbandmen really ought to be, and then they

will deſerve the reſpect of the public, and, probably, at length attain it.

The ſecond obſtacle, was the diſcordance between the landed and manufacturing intereſts. The conſequences of this were exemplified in the operations of the corn laws. It requires no great ingenuity to diſcover, that the jealouſies ſubſiſting between theſe two claſſes are futile, their intereſts being ſo intimately connected, that whatſoever depreſſes the one muſt be injurious to the other. The advancement of manufactures, and the increaſe of the numbers they can employ and pay, by enlarging the market for all kinds of land produce, is the moſt powerful inducement to improvements in cultivation, and perhaps the only effectual one to attempt the improvement of land originally barren. The greater the ſucceſs of the cultivation of the country, in multiplying proviſions, the ſupport of manufacturing people will be the more certain and regular, and the bread made from the corn produced in the country incomparably more wholeſome than that from foreign corn, frequently heaped up in granaries till the mephitic effluvia emitted from it is inſupportable.

We have ſeen, that all the laws obtained, with a view to raiſe the price of corn, have been unavailing, and that the intereſt of agriculture ſeems to have ſuffered in the conteſt. It is time, therefore, that ſuch uſeleſs reſtrictions were removed. But the law, by which a bounty is offered to encourage the exportation of Britiſh corn to foreign countries, has been ſuppoſed to be the cauſe of rendering the quantity more abundant in the home market, and ſo to have lowered, inſtead of raiſing the price of corn. Whatever has been the caſe, this law ſeems not only to be unneceſſary, but unjuſt. If it has had a tendency to raiſe the price of corn in this country above that in other countries, it was doing injuſtice to the induſtrious conſumers, and checking the progreſs of manufacture. If it lowered the price, it was defrauding the cultivator of a part of his juſt recompence, which ought always to be, in ſome proportion, to the vigour

and ſucceſs of his induſtry. At any rate, it was abſtracting a part of the funds levied, for the ſupport of government, from the whole community, to favour one part of it, in oppoſition to another, or rather, perhaps, to favour other nations, in oppoſition to the whole. The occaſional bounties given to encourage the importation of corn, on the proſpect of ſcarcity, ſeem to be no leſs partial and improper. In a nation where commerce is ſo flouriſhing and extenſive, and where all kinds of induſtrious labour are ſo liberally rewarded, there can be little cauſe to fear but corn, as long as it is to be found in the world, will be brought to ſo good a market. It would, no doubt, be ſomewhat higher priced in proportion to the ſcarcity; but, in juſtice to the huſbandman, the price ought to be ſomething better, when the quantity raiſed is leſs.

Had the commerce in corn been always free, ſecure from the interference of executive government, and without reſtraints or bounties of any kind, it is probable that agriculture would not have been left ſo far behind. But in the ſtate in which it now ſtands, compared with other induſtrious arts, it might, perhaps, be of importance, that ſome ſmall duty were laid on foreign corn imported, to compenſate the huſbandman, in ſome meaſure, for the difficulties of ſoil and climate, high rents, great expence of cultivation, &c. The great proficiency made in the different branches of manufacture, by the expertneſs of artizans, and the abridgement of labour, from the invention and improvements of machinery, may enable manufacturing people to give their brethren, the cultivators of the country, without any diſadvantage, this indulgence: and, if agriculture ſhould be thus enabled to provide amply for the wants of all the inhabitants, it would, in the end, tend greatly to the advantage of manufacture. Such a duty, however, ought to be very moderate, and not fluctuating with the market prices, but the ſame at all times. The legiſlature might alſo aſſiſt the agriculture of the country to correſpond more completely with an increaſing population, by giving all neceſſary indul-

gence and encouragement to the cultivation of every kind of improveable waſtes. This it would be the more enabled to do, if the money beſtowed in bounties on exportation and importation were ſaved.

It would tend to deſtroy the unfortunate alienation between the agricultural and manufacturing claſſes, if the latter, inſtead of being collected in groups, were more regularly diſperſed over the country. It is now obvious, that, ſo far from being neceſſary to have all the operative people, employed in the principal manufactures carried on in theſe provinces, cloſely aſſembled together, it is frequently more convenient that they ſhould be ſeparate. It has long been the cuſtom of the great manufacturers of Glaſgow and Paiſley to employ weavers, &c. living 40 or 50 miles diſtant, as well as in intermediate places; and, not many years ago, a conſiderable part of the linen manufacture of Edinburgh was executed by weavers of this county. If any diſadvantage had been experienced from this practice, it would have been diſcontinued, and the operative people invited to aſſemble more cloſely. On the contrary, it would appear to be, in every reſpect, more advantageous. Operative people, living ſeparately in the country, are generally more orderly and attentive to their buſineſs, leſs given to cabal and riot. They ſave ſomething by the difference of houſe rent, carriage of fuel, and proviſions, &c., and are ſometimes enabled to provide a little for times of diſeaſe and old age. To the general cauſe of agriculture it would be very advantageous. The offals of all kinds, which amaſs around the habitations of man, though nauſeous when accumulated, are, by the wiſe appointment of Providence, highly beneficial, when ſpread over the earth. Theſe can only be carried to a ſhort diſtance from great towns, and much is waſhed away, and loſt. But as every thing caſt off by the inhabitants of the country produces fertility, the effect muſt be greater in proportion to the numbers and regular diſperſion of theſe inhabitants. Connection would be formed between huſbandmen and operative manufacturers reſiding

among them, and a mutual interchange of good offices would take place. While the former accommodated the latter in carriages and the like, the latter, with their families, would be diſpoſed, in return, to aſſiſt in ſome of the moſt urgent labours of the field. Habituated to theſe occaſional exerciſes, they would be better fitted, and take more pleaſure in performing them. Some of the children of ſuch manufacturing families would incline to work always in the fields, and, as they grew up, engage in the labours of agriculture; and thus manufacture, inſtead of abſtracting the labourers from agriculture, would ſerve to recruit them. On theſe conſiderations, it would appear to be proper, that convenient houſes for the reception of weavers, or ſuch other operators in manufacture as perform their work ſingle handed, were erected, one or more on a farm, on all farms which lay near the high roads communicating with ſuch towns as are the centres of their manufacture. Each of theſe houſes ſhould have as much land attached to it as would ſerve to feed a milch cow and furniſh potatoes and greens to the family, to be cultivated by way of relaxation in ſpare hours. This topic is trite; but the advantages which would ariſe from its being put in execution are too numerous for us to take time to expatiate on them at preſent, and too obvious to require it.

The third obſtacle mentioned, was the overſtretched land rents, &c. It is difficult to ſay how this obſtacle can be removed. While farmers are to be found, diſpoſed to take leaſes of land at an extravagant rent, it would be talking to the winds to attempt to perſuade landholders to rent their lands lower than the value, which, according to the partial eye with which every man regards that which is his own, they think it worth. And all other means to regulate the rent of land would be an encroachment on property, the protection of which every Britiſh ſubject thinks his birth-right. This having been the baſis of our proſperity, it is the earneſt wiſh of the writer it may never be infringed.

The adjuſtment of rents muſt, therefore, be left to time and the liberality and good ſenſe of landlords.

The ſame may be ſaid of the fourth obſtacle, the deficiency of the capital employed in agriculture for the purpoſe of carrying the improvement of the country to its full extent. While the rent of land continues to riſe as faſt, or perhaps faſter than its value increaſes, the ſtock engaged in agriculture cannot much augment: and, while greater profits, and leſs laborious exertions, await other branches of induſtry, little capital can be drawn from thence to agriculture. It is true, indeed, that people frequently purchaſe lands with part of the ſurplus wealth amaſſed in trade, and apply part to the cultivation; but the quantity of food for the ſupport of induſtrious conſumers, raiſed by ſuch cultivators, is always far ſhort of that which the frugal economy of profeſſional huſbandmen produces. Beſides, the recoil of wealth from trade to the purchaſe and cultivation of land, is limited, all lands held under entail being out of its reach; and ſuch lands generally ſtand moſt in need of farther improvement.

The fifth obſtacle ſtated, (and, perhaps, the greateſt to the general improvement of agriculture) was the great land properties, the ſhortneſs of the leaſes given to the farmers who occupy them, and the frequency of changing thoſe farmers at the end of every leaſe. It was already obſerved, that, in conſequence of this, the intereſts of the landlord and the farmer are at perpetual variance. Thoſe who have the management of great eſtates are ſenſible that it is ſo, and many expedients have been deviſed to prevent the farmer from getting the advantage. Pretended doctors in agriculture have been conſulted, by whom rules for cultivation, and other profound ſchemes, have been preſcribed, to bind farmers to promote the advantage of their landlords, without regarding their own. But is it rational to expect energy from ſuch farmers, who muſt ever bear in their minds the lamentation of the poet?

Sic vos, non vobis, fertis aratra, boves!

It is ſufficient barely to ſtate this ſyſtem, to ſhow how unfavourable it muſt be to the ſucceſs of agriculture. It is very queſtionable if a continued perſeverance in it would be conſiſtent with the private intereſt of the landholder. Regulations are preſcribed, and frequently forgotten; but no attention which can be paid by the managers of great eſtates can make farmers ſtrictly fulfil the letter of them, when they apprehend ſuch regulations are diſadvantageous to themſelves; nor have the deciſions of the courts of juſtice been favourable to the enforcing of ſuch capricious reſtrictions. The chief effect of thoſe reſtrictions, therefore, is either to damp the ſpirit of farmers by enforcing them, or to injure their morals by the temptations ſtill found to elude them. Hence it would appear, that the private reſtraints impoſed by landholders on their farmers, with a view to raiſe the rents againſt the end of the firſt leaſes, have as little efficacy as the public reſtraints on the commerce of corn. The rent, or yearly value of land, can be increaſed only in three ways: *1ſt*, When the growing proſperity of the country occaſions a greater abundance of money, and, of courſe, the value of money ſinks, the money rent of land naturally riſes in the ſame proportion. *2dly*, Proprietors of land, by laying out expence on the improvement of it, ſuch as, for incloſing, draining, or the purchaſe of manure, may increaſe the value. *3dly*, An induſtrious farmer may, in the courſe of a leaſe, increaſe the fertility, and, conſequently the yearly value of the farm. All increaſe of rent, which is occaſioned in the firſt way, evidently belongs ſolely to the proprietor. The increaſe, in the ſecond way, being purchaſed at his expence, equally does, and, accordingly, both proprietor and farmer have thoſe improvements in view in fixing the rent. The increaſe of rent, occaſioned the third way, ſeems, in equity, to belong chiefly to the farmer; that is, ſo far as the increaſe of fertility has been really occaſioned by his ſkill and attention: for the firſt cauſe of the increaſe of rent, and even the ſecond, in the article of incloſing, &c., is ſo intimately combined with the third, that it is difficult

preciſely to determine the amount of each. However, it would ſeem, that a good farmer is, in equity, entitled to ſome recompence for his uncommon toil, ſkill, and attention, more than he can obtain in the courſe of an ordinary leaſe. At leaſt, there is no doubt that all farmers think ſo: and, while their landlords are of a different opinion, and diſpoſed, at the end of every leaſe, to let farms to new tenants, for a ſmall advance of rent above what the old ones think themſelves able to pay, farmers will always be cautious that landlords ſhall obtain as little advantage as poſſible from their labours.

In order to get rid of this great bar to the progreſs of agriculture, it would ſeem proper, that the poſſeſſion of farmers were made perpetual. It is probable, that landholders may ſtare at ſuch a propoſition. But, it muſt be remembered, we are not addreſſing ourſelves to the prejudices of any particular claſs, but conſidering what might contribute moſt to the general good. Beſides, no agrarian law is meant here to be propoſed, nor any infringement on the eſtabliſhed rights of individuals. Though the poſſeſſion of farmers were rendered perpetual, or to laſt ſo long as the ſame family choſe to continue in the farm, the landlord would ſtill have the ſame right to the regular payment of rent, and to eject ſuch farmers as ſhould be found deficient in that duty. In order to adjuſt the quantum of rent, according to the circumſtances of the country and the ſtate of the farm, at the end of every 20 years, an inqueſt of impartial men of judgment might be appointed, to take cognizance of ſuch alterations as might have taken place during that period, and affixing the rent for the next 20 years accordingly, with an equitable regard to the juſt rights of both parties; and this might frequently be done by the parties themſelves, without any aſſiſtance. The farmer ſhould have the property of the trees he might plant in places unfit for tillage. If it ſhould be no longer convenient for the family of a farmer to continue in the poſſeſſion, the intention of removing, with the cauſes which induced it,

ſhould be intimated, in proper time, to the landlord, for his conſideration, that, if he ſhould think it reaſonable to accept of the reſignation, he might appoint the farm to be viſited, and, in caſe it has ſuffered any damage, this damage ſhould be eſtimated, and, like rent, ſhould be a preferable debt.

In this manner, the intereſt of landholders would, probably, be as effectually ſecured as by all the complex refinements which have been deviſed for that purpoſe. They, and their people of buſineſs, would, at the ſame time, be freed from the haraſſing circumſtances accompanying the attempts to carry thoſe refinements into execution. To enjoy the income of a great eſtate, and to produce that income by cultivation, are two employments of a very different nature. It is probable, that thoſe whom Providence has deſtined to the firſt may frequently be miſtaken in many things which relate to the laſt. It would, perhaps, be better, therefore, to leave the cultivation of the country to thoſe who are engaged in it. A landlord would have no cauſe to fear, that, by making his farmers ſomewhat more reſpectable, he would be leſs ſo. He would not be leſs the object of reſpect, that he was no longer the object of dread. And, ſurely, the reſpect of independent men is more valuable than that of ſlaves.

We ſhould thus have a permanent race of huſbandmen, each generation of whom would derive knowledge in their profeſſion from the experience of their predeceſſors. Freed from embarraſſing reſtraints, and ſatisfied that they and their children would enjoy the juſt recompence of their important labours, they would be ſtudious to know, and diligent to execute whatſoever might tend to increaſe the fertility of their farms. Though the increaſe of the capital employed in agriculture might be ſlow, it would be more certain among a ſteady race of huſbandmen than when they are perpetually ſhifting; and, as it increaſed, the operations of agriculture would be more energetic; and the high rents, and any reaſonable addition which might be

made at the end of 20 years, would be leſs diſtreſſing, as the operations of agriculture became more powerful.

Before we quit this part of the ſubject, it is proper to obſerve, that, though it is recommended to landholders, for the ſake of their own eaſe and advantage, as well as for the good of the public, to give farmers a more ſteady unencumbered tenure of their poſſeſſions, it is not meant that thoſe landholders ſhould be deprived of the choice of uſing their property as they think proper. But there could, ſurely, be no harm in empowering incumbents on entailed eſtates, if they ſhould chooſe, to give perpetual leaſes to farmers, when ſuch leaſes had no tendency to injure the rental. Nor is it wiſhed, that ſuch land proprietors as incline to make improvements on any part of their eſtates ſhould renounce that reſpectable amuſement. They cannot, perhaps, entertain themſelves in a manner more rational or more uſeful. Their greater leiſure for inquiry, and their ſuperior ability of making experiments, might lead to diſcoveries, important to the cauſe of agriculture, which could not ſo certainly be derived from the practice of ordinary huſbandmen. Happily the late diſcoveries in chemiſtry and natural hiſtory have now overthrown thoſe falſe and abſurd theories with which the practice of agriculture has too long been encumbered. Speculative people, who have aimed at being more wiſe and learned than the laws which nature preſcribes to us, ſeem to admit, and, to take an eaſier way of attainment than ſhe has directed, have, one after another, advanced their ſyſtems. By thoſe blind guides the agriculturiſt has been led to grope and ſtumble in the dark, and, when he was made to believe he had laid hold on the truth, has found, in the end, that he only graſped error. The diſcoveries alluded to have reſtored him to the day, and taught him not to enter the cavern of inquiry without the torch of experiment in his hand. Though thoſe diſcoveries ſhould proceed no farther, they have been a great benefit to agriculture; but, it is probable, they will ſtill have more conſiderable effect. A number of ingenious and

benevolent men are generouſly employed in making reſearches into the ſecrets of nature, for the benefit of mankind, whoſe philanthropy, compared with the ſordid purſuits in which the bulk of the world are engaged, does honour to humanity. In the courſe of their inveſtigations on the different properties of matter, new ſources of fertility may be diſcovered, and new means of increaſing our harveſts, at a moderate expence, may be found. It would be an employment becoming landed gentlemen to encourage ſuch reſearches, and to carry experiments into practice, on ſuch diſcoveries as may reſult, in order to make the utility evident to huſbandmen.

If this principle be admitted, that the more thoſe who are employed in agriculture are engaged, by the proſpect of advancing their own intereſt, to conduct it with vigour, the improvement of the country will be more ſucceſsfully promoted, little need to be ſaid reſpecting the ſixth obſtacle. From 100 to 150 acres of arable land is ſufficient employment for the activity of one man. If the farm houſe is placed nearly in the centre, manure can be carried, work conducted, or any thing looked after, on all parts, with very little loſs of time: and, on farms much more extenſive, it is obvious, this cannot be the caſe. To repeat more arguments in favour of moderate farms ſeems now to be needleſs.

The ſeventh obſtacle, the effect of the game laws, it has been already obſerved, is of an inferior kind, and the nature and extent of the injuries it occaſions have been fully illuſtrated. We, therefore, proceed to offer a few hints on other particulars, by which the improvement of agriculture might be promoted.

We ſhall begin with the natural paſtures; that is to ſay, thoſe parts of the country which, from their elevation in the atmoſphere, or the inequalities of their ſurface, are unfit for tillage and corn crops. All thoughts of making any improvements on thoſe having been long ago given up, they are left to the ſheep to gather what ſuſtenance from them

they may naturally yield; and a few ſheep farmers have engroſſed the poſſeſſion of a large extent of country. In this condition, thoſe paſtures, which, in this county, are about half the ſurface extent, muſt be gradually diminiſhing in their real value, and the ſubſiſtence of the flocks, when deprived of the aid of human induſtry, more ſcanty and precarious, and, of courſe, in proportion to the hardſhips to which the animals are expoſed, the benefit derived from their wool and mutton muſt be leſs conſiderable. The injuries which time operates on a neglected country, being ſlow, are leſs palpable, and, perhaps, will not be generally admitted; but a little reflection will convince the unprejudiſed mind that they muſt certainly take place. Every new gully which a torrent forms muſt diminiſh the extent of ſurface paſture. Wherever ſurface water is, by any accident, detained, it will prey upon the eſculent graſſes, and nouriſh moſſes and other uſeleſs herbage in their place. The herbage rejected by ſheep will gradually prevail over that which is eaten. And thus the quantity of paſture muſt be continually diminiſhing. It would, therefore, ſeem proper, that ſheep were put more under the protection of man, by engaging a greater number of people to follow a paſtoral life; ſo that each, in the purſuit of his own intereſt, by providing better accommodation for his flocks, may render the paſture grounds of the country more valuable to the public. The firſt ſtep to this purpoſe would be to begin with making a ſufficient number of incloſures on the paſtures. For this the hills always furniſh abundance of ſtones, and the practice of the inhabitants of the diſtrict of Carrick, in Ayrſhire, and of the counties of Wigton, Kirkcudbright, and the weſtern part of Dumfries, is a very good example. But the author of this Report, in a former work, to which, it is hoped, the public will pardon his repeatedly referring, has, from inferences drawn from the nature of ſheep, ſtated a number of obſervations on the means of deriving the greateſt advantage from paſturing them. As it would be improper to ſwell this Report with long extracts, he begs leave again

to refer to that work *. It is true, indeed, the experience from which thoſe obſervations were derived was narrow; but he having ſince, in an extenſive tour made through the ſouthern paſtoral diſtricts of Scotland, &c., in the year 1793, under the direction of the Britiſh Wool Society †, found nothing material to contradict what he had before advanced, with the greater confidence recommends it to the public.

If ſome ſuch practice, as has been there recommended, were to be adopted, the paſtures, inſtead of degenerating by neglect, would be gradually improved. The flocks, under the more immediate protection of a number of induſtrious ſhepherds, employed in ſupplying their occaſional wants, and defending them from incidental injuries, would ſuffer leſs by diſeaſe and hardſhips, and the profit ariſing from tending them would be much more conſiderable. Sheep attended in this manner would always be in good habit, and the owners could thus diſpoſe, at all times, of a great part of their ſurplus ſtock immediately to the butcher. Being thus freed from the neceſſity of adapting their rule of breeding to the prejudices of a certain ſet of purchaſers, they would naturally be led to conſider what kind of ſtock, taking carcaſes and wool, and all circumſtances together, would be moſt advantageous in their reſpective ſituations. And as any addition to the value in quantity or quality of the wool, not counterbalanced by other circumſtances, is a valuable conſideration, they would be induced to purſue every prudent meaſure to improve the fleece. What the patriotic intentions of the Britiſh Wool Society, from a concurrence of adverſe contingencies, has not been able to effect, would thus take place of itſelf.

A number of collateral illuſtrations might here be given, in ſupport of what is above ſtated; but all of them, upon examination, ſeem ſo palpable, that to trouble the intelligent reader with the peruſal of them would be offering ſome

* Naiſmith's Thoughts on Induſtry, &c. Book IV. Chapters i. ii. iii. and iv.

† See Naiſmith's Tour, &c. Edin. printed by W. Smellie, 1795.

kind of affront to his underſtanding. We go on, therefore, in the next place, to obſerve, that it would be advantageous to the ſucceſs of agriculture, if huſbandmen, as a particular claſs of the general ſociety, were more intimately united. The inſulated ſituation, and ſequeſtered manner neceſſarily attached to the life of huſbandmen, has been already mentioned, as tending, in ſome degree, to depreſs that order; and ſuch meaſures as they have taken for their joint ſupport have been deſcribed. But other important purpoſes might be effectuated by a complete aſſociation of all huſbandmen into particular ſocieties, conſiſting of moderate contiguous diſtricts, ſo as to be moſt convenient for the members aſſembling or communicating on proper occaſions. All the members of each of thoſe ſocieties ought to be bound to ſubmit to the general will of the ſociety, and to obey its laws. Each member ſhould alſo pay ſtated contributions into a common purſe, to be applied, as circumſtances require, for the benefit of the ſociety. Committees ſhould be annually choſen, to manage the buſineſs, and conſtruct ſuch laws as may be requiſite for the common good, and theſe might afterwards be ſubmitted to the general meetings for their ſanction. From the wiſdom of the regulations, and integrity of adminiſtration obſervable among the friendly ſocieties of artificers and others, there is no cauſe to think that huſbandmen would, in any reſpect, be more deficient in the conduct of public buſineſs, and eſpecially ſuch as was intimately connected with their own profeſſion. We may reaſonably hope, therefore, that the operations of ſuch an aſſociation of huſbandmen would, in many ways, conduce to promote the ſucceſs of agriculture. It will ſuffice to give the two following inſtances, by way of illuſtration.

1*ſt*, It might be made a general law, in every ſociety, That all the members were to be bound to extirpate, while in the flower, all thoſe weeds, within their reſpective poſſeſſions, which bear ſeeds, in any degree, winged or tranſportable by the winds, ſuch as the common dock (*rumex vulgaris*), the burr thiſtle (*carduus lanceolatus*), the marſh

thiſtle *(carduus paluſtris)*, the prickly thiſtle *(ſerratula arvenſis)*, the ſow thiſtle *(ſonchus oleraceus)*, hawkweed *(heracium piloſella)*, the dandeleon *(leontodon taraxacum)*, tuſſilagow *(farfarum)*, ragwort and groundſel *(ſenecio jacobica et vulgaris)*, &c. whether theſe were growing in the paſtures and cultivated lands, or by the ſides of highways, brooks, ditches, or fences, any where within the bounds of the farm. That this work might be duly performed, one or more of the members of each diſtrict might, by turns, be appointed cenſors to viſit all the farms within it, at the proper ſeaſons, and report. If any individuals had been neglectful, fines, proportioned to the degree of negligence, ought to be impoſed and levied by the managers of the ſociety, for the uſe of the common ſtock. In this manner, thoſe weeds which are ſo great a nuiſance, by being collected before the ſeed was formed, might be converted into uſeful manure. And when the perpetual influx of adventitious ſeeds was checked, each huſbandman would have only to war againſt the perennial roots of ſuch as were within his own farm, and would more eaſily ſubdue them.

2*dly*, The common ſtock of every ſociety might be chiefly employed for the protection and defence of the property of all the members within the diſtrict, againſt all the different kinds of enemies to which the produce of the fields is expoſed; and that not only by checking actual depredations, but by preventing the repetition of them. Thus, if the attention of a number of ſocieties, ſpread throughout the country, and poſſeſſed of proper funds, were continually employed in counteracting the injuries done to the property of huſbandmen by the ſparrow tribe, by rooks, by rats, by moles, &c., the immediate depredations of theſe numerous waſteful enemies would not only be controuled, but, by a ſyſtem of hoſtility regularly purſued againſt them, the different races would be ſo far ſubdued as ſoon to become no longer formidable. The ſame would be the caſe with all the idle breakers of fences and wanton deſtroyers of the fruits of the field. So ſoon as a few examples had

convinced them that they were no longer committing treſpaſſes on the property of a forlorn individual, but on ſome member of a watchful ſociety, ready to take the alarm, and in condition to ſeek redreſs, they would be much more cautious to avoid offending; and thus the prevention of crimes, which is ſtill of more importance to ſociety than the puniſhing of them, would, in ſome meaſure, take place.

Agriculture would derive many other advantages from huſbandmen thus acting collectively. "As iron ſharpeneth iron, ſo doth a man the countenance of his friend." In their frequent communications, their tranſactions, in the line of their profeſſion, would be a common topic of converſation. Every one would be better informed of what was going on among his neighbours; and an emulation would take place among all, to vie with thoſe who were moſt active and expert. If any ſuperior practices in agriculture had taken place in another diſtrict, ſuch aſſociations would be well adapted to procure information concerning them; and, by a judicious application of part of the common funds, to aſcertain, by experiments, how far ſuch practices were ſuited to the diſtrict in queſtion. By the ſame means, experiments might be made with the ſeeds of plants not in common uſe, to know in what degree they would tend to augment the general produce. For theſe purpoſes, a ſmall piece of experiment ground, in each diſtrict, might be convenient.

From the general tenor of this Report, by which it has been recommended to make it the intereſt of thoſe who are employed in the cultivation of the country, to carry it to the greateſt poſſible extent, and to confide principally on them for that purpoſe, it cannot be expected that much will be ſaid on the practice of huſbandmen individually. In the former Report it was mentioned, that the lateneſs of the Lanarkſhire harveſts was one great cauſe why they were leſs productive. The cauſe of the late harveſts was aſcribed to a combination of the effects of ſoil and climate, minutely ſtated in the firſt chapter of this work;

and two things were recommended to palliate this evil; 1*ſt*, In the cultivation of the land, to attend to every thing proper to put it in ſuch condition, that the ſeed, when ſown upon it, may enjoy every advantage which the weather offers; and this is all that can be done to forward the harveſt. 2*dly*, Diligently to purſue every poſſible means of getting the corns quickly and ſafely gathered in, which is all that can be done to render the produce of the ſoil effective.

With reſpect to the firſt, dividing the particles of the ſoil, in a certain degree, ſo that while it gives admiſſion to the roots of the plants committed to it, it may retain a ſufficient quantity of moiſture for their ſupport, during the Summer's droughts, is requiſite. Both labour and manure are applied for this purpoſe. But, to effect this, labour can only be applied in a dry ſeaſon; and, where the ſubſtratum is impermeable, and the ſoil denſe, by the firſt great rains which ſucceed, the effects of labour are, in a great meaſure, undone. It is preſumed that all practical huſbandmen will acknowledge this to be true; and, therefore, ſince the expence of labour is now become ſo exceſſive, it would ſeem to be an object of great importance to conſider by what means the leaſt poſſible application of it might have the greateſt effect. It is univerſally acknowledged, that the leſs every kind of ſoil is overloaded with ſtagnant moiſture, in wet times, it is the more diſpoſed to retain a ſufficient portion in droughts; and that the influence of the weather, when not prevented by the ſtagnation of water, tends to ſeparate the parts of the ſoil, and prepare it to give admiſſion to the roots of vegetables. The natural inference from this is, that the greateſt attention ought, at all times, to be paid to ſurface draining, and laying the land in ſuch a way as quickly to throw off ſuperfluous water, and to plough as much as convenient of what is intended for Spring crops, with a deep furrow, in the early part of Winter, that there may be ſufficient time for the action of the weather, to prepare it for the reception of the ſeed. It is true, indeed, that this operation of the

weather, which prepares the ſoil for the intended crop, alſo fits it for cheriſhing the perennial roots of any weeds which may be lodged in it. But every expert huſbandman, in the courſe of his economy, will be attentive to ſubdue theſe; and, by proper alternations of paſture and tillage, of rotations between culmiferous and broad leafed crops; of hoeing and weeding, as far as circumſtances admit, he will generally ſucceed. But if he ſhould not, recourſe muſt be had to Summer fallow. In all other caſes, except that of deſtroying the roots of weeds, it would probably be prudent to diſpenſe with repeated ploughings for the ſame crop, and rather to ſolicit the aſſiſtance of natural agents to concur with the operations of a leſs expenſive labour. Manure, as well as labour, is applied for adapting the ſoil to the nouriſhment of uſeful vegetables. No huſbandman entertains a doubt of the good effects of applying thoſe ſubſtances which he has been taught to conſider as manure, as he has never found them fail, except when counteracted by labouring in improper ſeaſons. After what has been ſaid in the fifth chapter of this Report, of the ſubſtances uſed for manure in this county, it is needleſs to attempt a claſſification of thoſe ſubſtances. A collection of animal and vegetable matters will always be the moſt conſiderable, and, perhaps, the moſt important; and their tendency to putrefaction is evidently the cauſe of their beneficial effects. From the time they are committed to the ground till their total conſumption, they are perpetually aiding the operations of the weather above mentioned. It is, therefore, the buſineſs of huſbandmen, by every means in their power, to increaſe the quantity of this collection. But it does not appear to be neceſſary that they ſhould be ſolicitous with reſpect to the preciſe ſtate in which it is applied. The ſtate of the weather, of the ground, the ceſſation of other buſineſs, &c. will be the beſt rule. It is true, that, notwithſtanding that the new lights, which modern philoſophy has communicated, have taught us

"To know how little can be known,"

the itch for theoriſing is ſo prevalent, that ſpeculative gentlemen are diſpoſed to take the taſk out of the hand of nature, the moſt able operator, and adviſe huſbandmen to elaborate, for the nouriſhment of plants, a certain degree of putrefaction proper for their food. This ſeems to be unneceſſary. The writer of this has repeatedly had occaſion, after the magazine of dung collected through the year was exhauſted, to lay the dung of cattle, and their litter recently made, on land prepared for wheat, in the month of September; and, having marked the places where the unfermented dung was laid, though the quantity was leſs in the proportion it was leſs decompoſed, he never could diſcover, through the progreſs of the ſeaſon, that the crop was inferior. But though little delicacy need to be obſerved with reſpect to the time and ſtate of applying manure, every huſbandman muſt have obſerved, that the more accurately it is ſpread, and the nearer it is kept to the ſurface, its efficacy is the greater. This naturally leads us to attend to what is called top-dreſſing. The inſtances are few, in which top-dreſſings can be advantageouſly applied to the growing crops of corn in the northern parts of Britain: But there is no place where they may not be ſucceſsfully applied to paſture and meadow lands; and it deſerves to be particularly noted, that many ſubſtances, which have hitherto been found of little avail on grounds which are in tillage, have proved very beneficial to thoſe which are in graſs. It is believed, that every kind of foſſil which is diſpoſed to crumble by the influence of the weather, will, after being thus decompoſed, improve the verdure on graſs grounds: and, it is certain, that every addition which can be made to the quantity of eſculent herbage, on any ground, is the cauſe of that ground being more fertile in future.

As to the ſecond article, the in-gathering of the harveſt, though not leſs important than the preparation of the ground, leſs need to be ſaid concerning it, the huſbandmen of this county being generally pretty active in endeavouring to ſave the corn in rainy weather. One practice, however,

which has been ſucceſsfully followed, and ought to be more general, ſhall here be ſhortly ſtated. When the corn is ready for the ſickle, and the weather ſo damp and rainy that it cannot be got reaped ſufficiently dry, the band of the ſheaf is looſely tied round, near the top, and the root end being properly ſpread out, each ſheaf, ſingly, is made to ſtand upon it. This is here called *gaiting*. Theſe muſt be carefully attended to, and kept always ſtanding, and they will become dry, in the firſt interval of fair weather, in a few hours. In the mean time, a ſufficient number of little hollow cones, formed of ſpars and branches of trees, ought to be got ready on the corn field. The firſt time the corn is tolerably dry, it ſhould be bound up and built round theſe, in little ricks, care being taken that, by uſing part of the ſticks and branches, the loweſt tier of ſheaves may be kept from the damp ground, and the air allowed to paſs under them. Such ricks may be built by a man ſtanding on a ſhort ladder, or portable ſcaffold, without compreſſing the ſheaves by trampling on them: and if they are properly built, and the tops ſecured with a little thatch and a few ropes, they will ſtand ſafely, without the corn either ſpringing or heating, till it is fully cured to be carried to the barn, or built in larger ſtacks. This will be thought laborious; but, in ſeaſons when it is neceſſary, it is nothing to the labour which muſt be done, and the waſte which enſues, after the corn has been drenched with repeated rains, and muſt be ſpread on the ground to dry.

It has been repeatedly hinted, that the future fertility of paſture ground is augmented in proportion to the additional quantity of ſweet eſculent herbage which can, by any means, be made to grow upon it; and, for this purpoſe, all kinds of top-dreſſings have been recommended. But the writer of this cannot help regretting that ſo little attention has been hitherto paid to the propagating of our native graſſes. As they are hardy and congenial to the country, the reproduction, from a well choſen mixture of them, muſt certainly be greater and more unfailing, and tend more

to lengthen the verdure of the year. White clover, which is the moſt univerſal, and, perhaps, the moſt important, is almoſt the only one which has been a ſubject of cultivation. But there are others, a little attention to the propagation of which would thicken the turf and increaſe the quantity of eſculent herbage. It is preſumed, that no perſon who has paid attention to the different graſſes prevalent in the fields, has failed to obſerve, that thoſe paſtures, which are found to be of the richeſt and beſt feeding kind, always abound, particularly, with the foxtail graſs, &c. But it is needleſs to enumerate the ſweet native graſſes here, the author, in the Appendix to a work to which he has frequently alluded, having deſcribed many of the moſt important, both for hay and paſture. About the ſame time, a much more able botaniſt, Dr. Curtis of London, was employed pretty much in the ſame way, and publiſhed a pamphlet, deſcribing and recommending a good many of the native graſſes, to which thoſe who wiſh for better information may have recourſe. It would, ſurely, not be difficult to propagate thoſe graſſes. It may always be obſerved, that any of them, of which a few are lightly interſperſed through a field when firſt laid in paſture, from their ſuperior congeniality to the ſoil and climate, annually extend, till the ſurface is, in ſome meaſure, repleniſhed. It is probable, therefore, that if they were once more generally diffuſed, by mixing a ſmall quantity of the ſeeds of any of them, which might be preferred, with artificial graſs ſeeds, ſo many of their ſeeds would be ſhed on the ground, in the courſe of paſturage, that a rotation of tillage would not fully extirpate them. But, though it ſhould not be ſafe to depend on this, if it were once common, it would be as eaſy to ſave the ſeeds of native graſſes as thoſe of rye graſs. By thus attending to every means of extending the propagation of eſculent graſſes, the paſture would be more valuable, and the alternations of paſture and tillage, practiſed in this and other counties, would, in the moſt certain and eaſy manner, enſure a continued increaſe of fertility in the produce of corn.

THE END.

## POSTSCRIPT.

SUCH has been the fluctuation of the money value, and prices of things, ſince this Report was firſt publiſhed, that it became frequently doubtful what period ſhould be taken for the rule; and ſome are ſtated as formerly given, and ſome as they ſtand at preſent. One matter, relating to money, it may be proper juſt to take notice of. The table of the miniſter's ſtipends, page 65, was taken from the Statiſtical Account of Scotland. Several of the clergymen have ſince been ſueing for augmentations. Some of theſe ſuits being ſtill in ſuſpenſe, we ſhall only add, that the ſtipends of each of the miniſters of Glaſgow is advanced from 165 l. to 200 l.

## ERRATA.

| Page | Line | | |
|---|---|---|---|
| 12, | 17, *for* Farenheit's | *read* Farenheit's |
| 63, | 27, building | buildings |
| 109, | 37, too late or too early | too early or too late |
| 113, | 3, agriculture | agricultural |
| 115, | 24, ſlaked | ſlacked |
| | 31, ſlakening | ſlacking |

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